

GREAT LAKES TECHNOCRAT

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A Fanciful Story of Fact

I am older than Written History or Social life. I am even older than the ancient Price System. Yet, I am also younger than the latest Blueprint approved by the Patent Office or the last Gleaming Product rolling from today's Assembly Lines. Somewhere, I am dying every day, Decrepit and Outdated. Somewhere, every day, I am being born again, shining with New Efficiency and Greater Power.

From Age to Age I have been Man's Constant Companion. I am with You now, although You may not recognize me. As You travel along that untrod road leading into the Future I will also be there. You cannot Live without Me. I am that Force which is the essence of your Physical Relationship with your external Environment. I am an indivisible part of You and your long, tedious Social Progression. I Am Technology.

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Illustrating the Futility of Price System Methods of Operation; Interpreting the Trend of Events from the Social Aspects of Science; and Presenting the Specifications for Total Mobilization for Peace!

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I Am Technology

A Fanciful Story of Fact

by The Peripatetic Technocrat

The term Technology is used in this story with two meanings, one past and one present. The past meaning is in a general sense to include all human discovery, invention and progress in the fields of science and the industrial arts from primitive man down to now. This is the dictionary definition of Technology.

Near the end of the story the meaning shifts to the specific sense of the term as used by Technocracy in relation to the American social problem today. This is that Technology is a process of production which when once started itself then controls all further operations.

Since technological processes of production are barely 50 years old it is necessary to use both definitions in order to outline the underlying importance of Technology in social life and social change.

Whether in its earlier role of discovery, invention and progress in the pursuits of livelihood, or in its modern role as a process of production Technology is the means whereby men live, and have lived. The stage of development of Technology at any given period of history, plus or minus the degree of its application, has always determined the General Welfare of man. In the past this has always been low and it is very little higher today.

However, the present advanced stage of development of Technology constitutes a guarantee of much higher living standards for all as soon as Technology is freed from the restrictions of the Price System. As North America progresses deeper into the social dilemma of the Power Age an intelligent awareness of the vital role of Technology in social life has become a necessity without which civilized life cannot go on much longer. Here is our contribution. It is the autobiography of Technology written from within the framework of the Price System where it is still confined.

Record of the Rocks

When the creature that was to become Man was yet a running-climbing Ground Ape, still descending from his remote Arboreal Ancestry of the Mesozoic Era, I helped to make his perilous existence a little less perilous. I gave him his first Tools and Weapons. I taught him how to crack open nuts with Hand Rocks, how to pry up boulders with Stakes, in the search for insects, and how to use Sticks and Stones to add Power to his Bare Hands when striking blows.

That was in the Eocene Period, at the opening of the Cenozoic Era, many millions of years ago. Geologists have not yet found the Remains of my presence then, but the records of Paleontology indicate that I was already upon the scene before the first sub-men arrived.

I taught that low-skulled, walking sub-man, *Pithecanthropus erectus* how to chip rude Hammers, Knives and Flakers from flint, agate and quartz. That was in the Pliocene Period at the end of the Cenozoic Era, before the First Glacial Age, at least a half a million years ago. The proof of my presence then is scattered over the world embedded deep in the rocks. The mammoth, the giant beaver, the woolly rhinoceros and the sabre-toothed tiger still hunted abroad. I was with Man already then, helping him to fight off his Enemies, to get more Food and to dispense occasionally with the necessity of playing Jackal to the more powerful beasts after they had finished gorging on their kill.

After this first proof of my Operations, the Scroll of the Rocks is blank.

A quarter of a million years unravelled from the tireless loom of Time. The First and Second Ice Ages intervened. The Cold crept down from the North. The Face of the Land changed. *Pithecanthropus erectus* vanished somewhere, in retreat before the Ruthless Cold. Twice the great sheets of Ice spread over a large part of the Earth. Twice they retreated. Then a Temperate Period came. It was now the Second Interglacial Age, the Pleistocene Period of the Cenozoic Era.

During this time both Man and I, Technology, staged a comeback. The Man of that period is known as *Homo Heidelbergensis*. He was a powerful Brute of gorilla-like proportions. My Implements then were much improved and bigger than those of the Pliocene. They consisted of stone Chopping Tools, Hammers, Rough Axes, Flakers and Knives. With these the Heidelberg Man waged precarious warfare against the Opposing Forces of his environment.

Again the Ice came down from the North and drove most life to Warmer Climates, where its traces have been lost. Man and I, Technology, disappeared from the Scene while infinite Time parcelled out over 3000 generations. Again a Temperate Period came, the Third Interglacial Age. Again we both came back to leave our record in the Rocks. That was a Hundred Thousand Years Ago. The Man of that time is known as *Eanthropus*, the Dawn Man. This period marked the end of the Eolithic Stage of my Development.

The Implements I was making by then were a great advance over what I made before. I devised Scrapers, Throwing Stones, Borers, Knives, Darts, and improved Axes that were held in the hand. Old Father Time chipped off another Thousand Generations from his everlasting mountain.

Then the Fourth and last Glacial Age started to creep over the Land. *Eanthropus* and my works went the way of *Pithecanthropus erectus* and the Heidelberg Man. A much more intelligent Sub-Man replaced them. He is known as the Neanderthal Man. With him a higher Stage dawned in my Development.

Early Paleolithic Technology

Three times I had gotten a Start with Man and three times the Ice had driven us south. This time we stuck it out. *Homo Neanderthalensis* had potentialities. He was a squat, hairy, ugly Fellow, a mighty hunter and far smarter than any of the Sub-Men who went before. He achieved the one thing that might have saved Them. *He Discovered Fire.*

I dont remember clearly how it was contrived. It may have been that he came across a Burning Forest, struck by lightning, and stumbled on it that way. It may have been that he approached an Erupting Volcano, saw a fiery stream of Lava and poked at it with his Club. The Club would have caught afire. It may have been that he was chipping Stones too close to a pile of dry leaves. Sparks could have ignited the leaves. After the original discovery, I taught him to produce Fire at will by striking Iron Pyrites against Flint in the presence of dry leaves.

The important thing was that he had Fire. This set him apart from the Lower Life around him. It came just in time. The Fourth Glacial Age was well on its way. That was 60,000 years ago. As the weather became more severe, Neanderthaloid retreated to the Caves. Driven by instinct, the wild beasts did the same. There were cave lions, hyenas and the great cave bear. Man had to Fight for possession of a Place to lay his head. With Fire and the Cutting Edge of Stone he was

irresistible. Yes, I did help him then, with a Superior Technology to what had obtained before.

During this period of Cave Life, I began to expand my Operations. I taught Man how to use the Skins of animals so as to keep his own body warm. I taught him how to make Awls, cut Thongs and pierce holes so he could drape the Skins around him. I taught him how to dress Skins. I taught him to make Spears with which to kill reindeer, bear and mammoth. I taught him to cook his meat over the Fire. I taught him how to dry it in the Sun and save it for future use.

My Tools and Weapons of that period included several varieties of Scrapers, Borers, Hand Axes, Choppers, Awls, Planing Tools, Darts, Knives, Spearheads and the Hammer and Bone Anvil. With Neanderthaloid, the first Family Life began and the first division of Function in the Production of Goods and Services. Fire made all this possible and inevitable. It did even more. It assisted the Mental Development of Man. When he began to cook his food, this practice led to a shrinkage of the Bony Structure and Muscles previously developed to masticate raw meat, etc. This created more Room on the inside of his Skull and facilitated the Frontal Development of his Brain.

Late Paleolithic Technology

Homo Neanderthalensis prevailed for Tens of Thousands of Years. Although he was better than the Sub-Men before him, he was not quite good enough to survive. As the last Ice Age waned and the Land became Fruitful again, a new and higher type of Man appeared. He came out of the South where he had been slowly Evolving and Improving. He is known as the Cro-Magnon Man. That was about 30,000 years ago.

Cro-Magnard is said to be the first *True Man*.

I was with Him also as he grew and developed parallel with the Neanderthal Man. I, Technology, am everywhere. Wherever Men are, I exist and Expand to a greater or lesser degree. The extent of my Operations and Development depends upon the Natural Resources available, the pressure of the Physical Environment and the Receptivity among Men toward my Pressure. I exist both as an Idea and a Physical Force. I am a Real Concept in the minds of Men. The way I operate is like this.

First, a Physical Need must exist, that is, a Function must require fulfilling. Such Needs and Functions arise out of the Interacting Forces present in Man's relationship with his Physical Environment. The Need and Function having preceded the Thought, I then go into action as an Idea to Fulfill the Function. I invent Tools and devise Processes. In turn these Tools and Processes react upon both Man and his Physical Environment, bringing Adaptations in both.

Being a Functional Idea, I, Technology, could not devise a Tool or Process beyond Man's Mental Ability to understand or his Physical Strength to use. It wouldn't Work because he couldn't work it. It would be no good to him. It wouldn't Fulfill the required Function.

This proves that I, Technology, am not a thing apart from Man, an Abstract or Occult Concept above his Physical Horizon. Instead I am an integral Part of him and his Environment. I am a Real and constantly changing Idea and Physical Force. I am the First Effect and also the End Product of Man's Physical Needs. And Man, physically, mentally and culturally is the End Product of my Tools.

So it was that I reached a **Higher** Stage of Development with the Cro-Magnon Race than I had with Neanderthal Man. We came North and drove our own kind out of the land. Cro-Magnard exterminated Neanderthaloid, Man, Woman and Child. He did not intermingle with him. I, Technology, drove out the crude Tools of the Early Paleolithic and replaced them with the Finer Implements of the Late Paleolithic.

For hundreds of centuries, I, Technology, and Cro-Magnard had been acquiring Skill of Hand and Power of Brain. We had developed Tools and Weapons that Neanderthaloid did not have, such as, Chisels, Gravers, Etching Tools, Drills, Bone Blades, Javelin Points, Spear Points, Daggers, Eyed Needles, Smoothers, Wedges, Fish Hooks, Harpoons, Pins and Shutles. The early Family Life of Neanderthal had been carried forward to Tribal Life and Organization.

We together brought Art into the world for the first time. Deep in the gloom of fireless Caves, safe from prowling beasts, I whiled away countless hours Painting on the walls. I devised Soapstone Lamps in which Fat was burned for illumination. I had Pigments of black, brown, red, yellow and white. I Painted the bison, horse, ibex, cave bear and mammoth. My paintings were organic, objective, functional and integral with the Life and Time of Cro-Magnard. They still retain their Colors to this day. I also Carved the heads of women in ivory and soapstone in the form of Statuettes. Yes, with Cro-Magnard, I, Technology, made a great Step forward but a greater Development was just ahead.

Neolithic Technology

About 12,000 years ago the first Neolithic Men appeared from somewhere in the Southeast. I had been

with them also for Generations too long to count. With Neolithic Man I, Technology, developed Human Culture to its highest point up to then. With him I achieved *Polished Stone Implements*. I had an Excellent Stone Axe which was Perforated so as to be attached to a Handle.

I had learned the Function of Seeds and the use of Plants. I had Domesticated dogs, cattle, sheep, goats and pigs. I had learned to Weave Baskets to carry things. I made Pottery to cook in and to use for storage jars. I Cultivated wheat, barley and millet. I Ground coarse Flour and Baked Bread. I Wove cloth out of flax and wool. I made Sharp Needles of bone with which to sew. I also made nets to catch birds and fish.

We had no trouble conquering the Cro-Magnon Man who occupied the Land, for I, Technology, had developed the Bow and Arrow. It could kill at a distance. As Cro-Magnard had driven out Neanderthaloid, Neolithic Man now conquered Cro-Magnard. A Superior Technology will always prevail. However, it was not a war of Extermination. The two races intermingled. Many traces of Cro-Magnon Man can be found today among Modern Man.

Neolithic Man had deserted the caves. He lived in rude Huts and in Dwellings built on timber piles over the surface of lakes. He was the world's first Herder and Agriculturist. I, Technology, improved my Stone Tools and Weapons almost to the ultimate. Many of my Polished Stone Implements *look* like Modern Tools. Toward the end of the Neolithic period I learned how to use Metal. Gold was the first Metal I worked. Man used it, along with Jet and Amber, as an ornament. That's about all it ever was good for. I could never do much with the Stuff.

Bronze, however, had useful Qualities. At first I cast it in Moulds made to the shape of my best Stone Implements. That was about 7,000 years ago. Later I improved my earlier Designs. Neolithic Man and I stayed at the Bronze Stage of Development for 4,000 years. It was not until 3,000 years ago that I succeeded in Developing the use of Iron. That was well within the Historical Period of Man. Interferences to my Expansion had begun to appear.

With Late Neolithic Man I, Technology, had developed the first Writing. Then began the period of Recorded History. This recording has been largely the Chronicle of kings, priests, warriors, philosophers and politicians. These Chroniclers have not been kind to Me, Technology. They have emphasized Superficial Ideas and Events. They have Glorified the Top Dogs in Human Society. They have Twisted and Perverted the true Role of Technology in Social Life. All down through Written History, these Chroniclers have Practiced Obscurantism in favor of the Status Quo. The Real Record, however, is there. It lies buried far down in Geologic Strata, deep in the caves and scattered in the rubbish of Kitchen Middens all over the Western World.

I, Technology, was with Man when he was still sub-human, a hairy Savage eking out a precarious and perilous Existence. I accompanied him down through the Thousands of Centuries that elapsed before he developed into the Thing he is today. I was the Physical Force underlying his Existence, determining his General Welfare. I was the Means Whereby he Lived. I was with him when he Combined his Strength with that of other Men in Social Groups so as to Multiply it against the Opposing Forces of his Environment and thus gain Greater

Security for himself. In fact, I put him up to it. Social Life is a Technological Idea.

The Medicine Man Takes Over

With Social Life, so I thought, Man's Development and my Expansion would proceed at a faster Rate. I thought to build upon the Curiosity, Experience and Memory of Men. I reasoned it out this way. Every new Discovery, Invention or adaptation come upon by early Man had necessitated a rearrangement of his relationship toward his Physical Environment. The behaviour of Man before and after the Discovery of Fire is an Illustration in point. There was a Constant Progression of Social Change.

I thought that if Man's Insularity were ended and he took up Social Life, this Process would accelerate Technological Development. I thought that with a Number of Men reacting upon their Environment as a Group there would be more New Discoveries, etc. Consequently, old Inhibitions and Prohibitions would have to be readjusted more frequently. This would tend to Eliminate one of my toughest opponents, Human Inertia, and give me a fluid, elastic Medium in which to Operate. It seems that I figured with too much emphasis on the Social Intelligence of Man and not enough upon his Cunning. For, *then came the Price System.*

Prior to the beginning of this System of Trade and Commerce, my record shows a steady development. My Tools progressed from the Simple to the Diversified, from the Crude to the Skillfully Wrought. The degree of my Application always kept pace with the Stage of my Development. There were no Buried Patents in the pre-Social History of Man. Instead, there was a long, slow but Steady Period of Expansion. Shortly after Social Life be-

gan, the proclivity of Man to adopt New Ideas slowed down.

For the next 5,000 years there was Little Social Change. Up to two thousand years ago, all over the world, Whole Peoples lived much the same as Neolithic Man had lived 10,000 years before. Indeed, as one Chronicler has written, this was the case with the great majority of Men in out-of-the-way places as late as the 19th Century A.D. Whence came this levelling off in the Rate of my Growth? It took me a long time to figure out, but I'm sure I have the correct answer now.

As I have told you, my Operations began at an early date in the life of Man. My original Sires were Nature and Physical Need. They begot Trial & Error, who was my Mother, and Empirical Knowledge, my Father. Unfortunately, I was not the only child of my parents. They spawned a large Brood. Among these were Superstition, Tradition, Greed, Shrewdness and Venality. These latter grew into Strong, Cunning Operators in a short time. They did not take to the same things I did. I was interested from the first in Conquest of the Physical World about me. They went off on all sorts of Odd Tangents, exploring that Egocentric, Inner World of the intangible. I was driven by an insatiable Desire to know the How and Wherefore of Physical Phenomena. They dived after Abstract Concepts. I was interested in Social Change. They were satisfied with the Status Quo.

They were always Discussing Abstract Concepts. The only question they would entertain about Physical Phenomena was how to manipulate them so as to maintain the Status Quo. This attitude of Superstition, Tradition, Greed, Shrewdness and Venality was then, and is now, the source of my Greatest Difficulty.

However, I kept on Pestering them with New Ideas. After a while, Superstition and Tradition got sore about it and tried to throw me to the wolves.

Greed, Shrewdness and Venality cautioned Hesitation. They said:

After all, we've made good out of some of the New Ideas Technology has brought in. We are Stronger than he is and can Accept or Reject his proposals as we see fit. He may bring in something Good anytime. Instead of kicking him out, let's Fix It so that Technology is under our control. We may need him some day. You never can tell.

So they fixed it, and that fixed me for a Long Time. However, the scheme they worked out will be their own undoing. It has some Fatal Contradictions in it.

All Shoddy and World Wide

After much weaving of Abstract Concepts, Superstition, Tradition, Greed, Shrewdness and Venality concocted the Price System of Social Life. This is a System organized and circumscribed to the single Function of Producing and Exchangnig Goods and Services for a Fat Profit. At first reading, this sounds harmless enough. I can assure you, however, that it has made a mess of Man's Social Life ever since it began.

The Idea to Exchange Goods and Services for Profit runs counter to my Historic Role. This, of course, is to Produce and DISTRIBUTE goods and Services as a Function of Man's relationship to his Physical Environment. I had Progressed Steadily at this for ages. The larcenous Concept of Exchange for Profit crept in about the time that Family Life developed into the more complex and diversified Tribal Organization. It is a low-born

'Johnny-Come-Lately' in the long life of Man.

It was not derived from the Physical World of Things and Events and Functions associated therewith, as my Idea of Social Life had been. It spawned from that Egocentric, Inner Domain dominated by Superstition, Tradition, Greed, Shrewdness and Venality. This Price System of Exchange for Profit has thrown obstacles in the path of my historic Function ever since it began.

Its network of Mercenary Rules and Rewards sets Man against Man, individually and collectively. In doing this, it subverts the original Purpose of Social Life. This, if you recall, was to obtain Greater Security for the individual by organizing him into Groups. This would Multiply his Strength Geometrically against the Opposing Forces of his environment. Social Life was a Technological Idea, a Tool or Device, if you please.

The idea of Exchange for Profit cancels the Technological advantages out of Social Life and reverts it back to something Lower than the Code of the Jungle. At least, that is not meretricious. The inherently Anti-Social nature of the Price System is an integral Part of its Framework and Operating Rules.

There is a basic conflict between the Technological Function of Social Life and the Price System's prostitution of that Function. However, Individuals are not to be blamed, it is the System which is at fault.

99.44 Percent Sham

They founded their Price System on Natural Scarcity, a Physical Factor, and Value, an Abstract Concept. On top of this they built a towering superstructure of Trade, Commerce, Business, Politics and Ecclesiasticism. This was then covered over with a shroud of Camouflaging Foliage com-

posed of a Choice Collection of Empty and Sugar-Coated Concepts. Any good textbook on politics, economics, morals or philosophy will give you the whole list.

They are the Treasured Darlings of the Status Quo. Seventy generations of men have been born, raised, and have died to the tune of their Dulcet Sophistries. But I, Technology, know that 10,000 generations went before who knew Naught of these Empty Concepts. I know that down underneath the Mountains of Sophistry old racial memories run deep. A Correct Idea never dies.

In the setup of the Price System I, Technology, was assigned a Minor Role. This consisted of regulating the Handicraft-Agrarian Methods of Production. My only Implements were Human Toil and Hand Tools. Thus my Development was Frozen approximately at the Level I had reached in the Late Neolithic Period. In substance, I became a Prisoner within the Framework of the Price System, at the beck and call of the Blessed Minority on top of the Social Dung Heap. Nevertheless, I, Technology, was the Physical Factor underlying the whole Structure. Without Technology, no matter how crude, Civilization would Relapse into savagery.

The only Real Concept in the whole Price System structure was Natural Scarcity. It was a Physical Factor always present in Man's environment. Without Natural Scarcity the Price System could not have endured. It Validates the Big Abstract Concept called Value and lends Credence to all the smaller ones. Natural Scarcity and I, Technology, are old enemies. We have Fought on a thousand battlefields. He always won because in my earlier days my Stage of Development was too Low. Then, ever since the Price System be-

gan, I've been limited to the use of Human Toil and Hand Tools and Handicraft - Agrarian Methods, in fighting him. This has been so all over the world except on one Continent. We'll come to that part of my story later.

Another Factor which had always Handicapped me in my struggles against Natural Scarcity was the fact that I, Technology, had never had Command of Enough Energy. The Forces of Energy are the Shock Troops of Technology. Although I had shown considerable Ingeniousness in the past in Improving Tools and Weapons, I had always been Held Down by this shortage of Energy. By Energy I mean Power, the power to do work such as is derived from Human Muscles, Work Animals, Water Wheels and Windmills. The output I was able to Produce of anything was always Geared Down to the amount of Power available from these sources.

Any high school book on physics will reveal that this amount is Negligible. The best I was able to do in the past was to Improve Skills and Implements. The only Tool with which I could ever hope to Defeat Natural Scarcity was Greater Production. This requires more Power, i.e., Energy, as well as better Skills and Implements. I was never able to Achieve this to any great extent except on One Continent. I'm ahead of my story again. We'll have to get to that later.

They Say The Sun Stood Still

All during the past, the only source material and references I could go to for Inspiration were my parents Trial & Error and Empirical Knowledge. Although they have piled up a tremendous output of Fable and Supposition in their long career, these two have not put out much Reliable Accurate Information. They were never of much help to Me. That had some-

thing to do with the Slowness of my Development in the past. A much better source of Inspiration was needed if my methods were ever to graduate from the Hit and Miss class. After a while, it came.

For the first 6,000 years of the Price System, Physical Conditions remained Static. These underlying Factors were Human Toil and Hand Tools and Handicraft-Agrarian Methods in combination with Ever Present Natural Scarcity. I, Technology, was Confined to a Limited Scope of Operations. Consequently, the Superstructure of the Price System, composed of Business, Politics, Ecclesiasticism, etc. was static also. There was no Social Change.

Superstition, Tradition, Greed, Shrewdness and Venality fought for and switched control of the Social Dung Heap among themselves for ages. There were many Wars. In fact, one eminent Society of International Law has estimated that in the last 4,000 years the Price System has produced 8,000 Peace Treaties but only 268 years of Peace. All these Wars added not one jot or tittle to the General Welfare of Man. They served excellently, however, as a Medium to enable one or the other Controlling Force to Climb to Eminence over Men's Graves. The Level of Civilization remained low. This, of course, was because I, Technology, was Restricted. It is a truism that the Level of Civilization is everywhere Dependent upon the Stage of My Development plus the Degree of my Application.

About 1,500 years ago a particularly Low and Barren Period of the Price System began. It lasted about 1,000 years. Superstition, Tradition, Greed, Shrewdness and Venality enjoyed their Greatest Reign then. More of the lowest and vilest Elements in

Society climbed to the top of the Social Dung Heap than ever before or since. It was the Golden Age of the Price System. These Elements concocted a new social dictum called Authoritarianism. This means Blind Obedience to Arbitrary Governance by Dogma. They crammed this down the throats of Men with Fire and Sword, Rack and Dungeon. I, Technology, was forced to flee from the Western World. Fortunately, I found a Favorable Territory in which to Expand in the East. Even Empirical Knowledge and Trial & Error were pushed into the Background. Then two things happened.

A First Time For Everything

A series of Physical Events occurred that caused a Revulsion against Authoritarianism to sweep over the Western World. Then a young and virile Stranger came riding out of the East. I would like to tell you about him first.

The Stranger's name was Scientific Method. He cast eyes upon Trial & Error and went for her, hook, line and sinker. Without ceremony or sanctification Scientific Method kicked Empirical Knowledge out of the picture and took Trial & Error to his Bed and Board. There was never a more fortunate Affair in the long history of Man.

It was a prolific Union too. Out of it sprang first, Observation, Research and Experiment, three beautiful Daughters. Then came that brace of stalwart Sons, Analysis and Synthesis. They always go together. If you hire One, you must also hire the Other, or else you get only half a job done. These five children grew up together. They were endowed with Intelligence and Integrity to an outstanding degree. I, Technology, took to them from the start. Since then we have been inseparable.

After an interval, another little Stranger came to the House of Man. It was the last and greatest of the offspring of Trial & Error and Scientific Method. Its name was Scientific Knowledge. It has New Characteristics never possessed by Empirical Knowledge. It is Exact, Organized and Verifiable. It is easy to check into its Source Material and References to find Inspiration.

Empirical Knowledge, on the other hand, had for thousands of years, enshrouded its findings in Folklore, Fable and Opinions. In case you don't know, an Opinion is a mixture of Supposition, Conjecture and Imagination. In other words, just a Guess. After the Price System got going good, Empirical Knowledge became worse. It mixed Physical Phenomena and Abstract Concepts into totally New Messes called Philosophy and Ideologies. It got so bad that I, Technology, had to hunt like blazes among all this Rubbish to find one Single Little Fact. So you can imagine how gladly I welcomed the coming of Scientific Knowledge.

One of the first Prodigies he performed was to segregate Facts and Opinions into separate fields. This job had become necessary. Opinions had always tried to masquerade as Facts. This Organized Confusion hindered my Expansion. I had to be able to tell the difference between the two. I, Technology, cannot Operate with Opinions. I need Facts. This segregation was accomplished by the Daughters of Scientific Method, namely, Observation, Research and Experiment. They attacked Facts and Opinions with glee and a new Weapon which I had fashioned for the job. It is a Testing Formula called Definition of a Fact. It operates as follows:

A fact is the close agreement

of a series of Observations of the same Phenomenon.

All Concepts that cannot meet its Rigid Specifications are classed as Opinions. Since all Opinions are outside the field of Facts, they are equally invalid for my Purpose and Function. However, it's a Free Country and Science does not want to make it Less Free. Every man, therefore, has the inalienable Right to make as big an ass out of himself as he likes in his Private Life by blurting out his Opinions. Since all Opinions are Equally Invalid, his neighbor has the same Right. In fact, the right to wallow in the anarchy of Opinion appears to be a 'Natural Born Right' of Man.

However, he has another 'Natural Born Right.' That is the right to be protected from the anarchy of Opinion. When this anarchy overflows and produces Social Effects, the line must be drawn. Any Man who Parades forth his Private Opinions into the field of Public Social Problems is a Menace to the General Welfare.

Prologue to Social Change

The great rise of Scientific Knowledge came about this way. During the Golden Age of the Price System while the Western World was stewing in the Fetid Cellars of Authoritarianism I, Technology, was Expanding in the East. When Physical Conditions became right, I moved West. Whenever, in the past, any Human Culture had become Static and Decadent, I had moved in with New Technology and New Men to Take it Over. I did this with Neanderthal Man, with Cro-Magnon man and with lesser known races. My Tendency is to Expand. If I cannot do it in one Land or culture, I will do it in Another. Any Economy that adopts Technology must there-

after Expand in the Social Field to a plane compatible with its Demands, or die out.

Into the Sodden Atmosphere of Authoritarianism came my Products from the East. The Arabs, Jews, Hindus, Nestorians and Chinese contributed. Some of these Cultures had received their Impetus from Ancient Greece. There, Scientific Knowledge had gotten off to a Respectable Start 2,000 years ago. It had been Squelched by the rise of Authoritarianism. The Men of the East had received Greek science as a Heritage. They kept it Alive and Improved upon it to some extent. During and after the Dark Age, Scientific Knowledge came west.

By then I, Technology, had achieved the Manufacture of Paper and Printing. I had developed the Magnetic Compass, for offshore navigation. I had Gunpowder. With the Arabs I had worked out Decimals, the Concept of Zero, Algebra, Spherical Trigonometry, Chemistry, Physiology, Medicine and Astronomy. I worked with Metals such as Gold, Silver, Copper, Bronze, Iron and Steel. My Textiles were of the Finest quality. I excelled in Horticulture and Agriculture. I had Tinctures, Essences and Syrups and I made Sugar from the cane. All this I brought West with me, but the Most Precious Thing I brought was Scientific Method. It led to the Renaissance of Western Culture.

Among the Physical Factors which brought about my Return to the Western World were the following: During the 9th, 10th and 11th Centuries a Series of Invasions by the Normans into the South created Population Pressures and Unsettled Conditions. The causes for these Invasions were rooted in the Poverty and Hard

Living Conditions of the North, i.e., too much Natural Scarcity.

Between the 11th and 13th Centuries a series of Holy Wars was carried on between the East and West. They are called the Crusades. They were brought about by the Social Dislocations caused by the Norman invasions; by Mercantile Rivalry between the East and West; and by the Split between the Eastern and Western Branches of Authoritarianism.

In the 13th Century, the Mongol Invasions threw the Doors between East and West wide open. Following the Mongol Invasions came the Black Death. It swept over the Western World and killed over a quarter of the Population. In the 14th and 15th Centuries the *Travels of Marco Polo* were widely read. It created a Profound Impression.

Off To A Good Start

All these events stirred up a Ferment. Out of it flowered the Greatest Advance of Science yet known. It was the Renaissance of Technology. Following it came the Renaissance, a revival of Art, Literature and Learning, which had long been suppressed by Authoritarianism. Scientific Method, along with Observation, Research and Experiment bent themselves to a Study of the Physical Laws by which I, Technology, must operate. Scientific Knowledge became Greater. After a few hundred years of this, it culminated in the Industrial Revolution.

With the opening of the Industrial Revolution I, Technology, at last came into possession of a Superior Set of Tools with which to Operate. I now had the Scientific Method, and a growing body of Exact, Organized and Verifiable Knowledge. With these splendid Tools it did not take me long to design the Major Tool I had always lacked. That was Ex-

traneous Energy. With this Tool I will remake the world.

Earlier, in the East, I had tried to design Extraneous Energy. I had some success with the Expanding Force of Gas in the form of Gunpowder; but I had not been able to convert it into Power. Then, too, Superstition took it away from me and used it to make Firecrackers. He claimed that the loud, popping Noises produced would scare away the Devils. Later I used this form of Energy in warfare.

In Ancient Rome I had stumbled on the Idea of getting Power from the Expanding Force of Steam. That was an age of Human Toil and I was unable to apply it within that Framework. So Superstition took that Discovery away from me also. He used it to cause Idols to turn on their Pedestals and to revolve their eyes, and for the opening of Temple Doors. It went over big with his Followers as a source of Awe. My time was to come later.

The Factors which finally brought about the introduction of Extraneous Energy were two, both Physical. One was the great Range and Complexity of my Improvements in Handicraft Methods. The other was the Rise of a great, new Physical Need. In the 12th Century I had learned to use the Power of the Wind. I built Windmills for grinding grain. The first one went up in 1191 A.D. It was destroyed by the Abbott of the Monastery nearby. He said it was a Menace to Civilization. Can you imagine that? It has ever been thus with Authoritarianism.

I had built Water Wheels to use the Power of Running Water, much earlier. By then I had learned to use the Power of Work Animals almost to the maximum of their capacity on Grinders, Pumps, Hoists, Transport Vehicles, etc.

Before I developed Extraneous Energy I had devised the Factory System of Production. This sprang out of my much earlier Idea of the Division of Function. However, its Expansion had been limited. Although I had Textile Factories powered by Water Wheels, their Ability to Produce was small. By then I had also gone in for the extensive Use of Iron. I had devised Mechanisms like the Crossbow, the Cannon, the Printing Press, the Loom, and others. This led to a greater use of Iron. I developed Forges and Blast Furnaces powered by Water Wheels.

This growing Range and Complexity of my Improvement of Handicraft Methods led to a much greater use of Fuel. At first I burned Wood. As the Forests dwindled away I turned to Coal. As the Coal Mines went deeper into the Earth, the problem of pumping out the Water which seeped in became too great for my Simple Devices. So I turned to the Power in Expanding Steam. Once again in the history of Man arrived a period when a great Physical Need arose. A Function needed fulfilling. So I, Technology, went to work as an Idea and invented the *Steam Engine*.

Try and Stop Me Now

At last I had Extraneous Energy at my Command. My Ability to Produce jumped immediately. Scientific Knowledge was by now turning out a Volume of Exact, Organized and Verifiable information. I delved into this for Inspiration. My Rate of Development speeded up. Soon the Western World was Powered by Steam. The Machine Age had dawned. The Industrial Revolution was on.

I soon learned how to use the Expanding Power of Gas in another Form. That was the Internal Combustion Engine. The idea came from my earlier Experiments with Gun-

powder. So I now had two Prime Sources of Power never before available. I had learned how to use the Molecular Energy in fossil fuels. Natural Scarcity began to take it on the chin for the first time, as Greater Production entered the picture.

Then Superstition, Tradition, Greed, Shrewdness and Venality went to bat once again to Maintain Natural Scarcity. They wove some more Abstract Concepts together and concocted a new Interference to my Development. It is called The Patent System. Ostensibly, it is supposed to be a set of Rules to Reward Incentive, Stimulate Initiative and protect the right of inventors to Extract Profits from their inventions. The Patent System is something else also, much more anti-social. The Rules are so drawn as to protect the Intrinsic Property Rights of Inventors in their Devices. Thus, they can do with them whatever they please. They are not compelled to Apply my New Developments, but they may withhold them from use altogether. Or, they may Sell these Property Rights to some one else, who may then Bury the Invention for all that anybody cares. The Patent System has grown into a Gigantic Graveyard for some of my Best Ideas. It has been said, however, "That which goeth down to the grave shall rise again."

In spite of this I, Technology, have gone ahead inventing New and Better Mechanisms, devising More Efficient Processes and tapping New Sources of Extraneous Energy. About a hundred years after the advent of the Steam Engine. I conquered the Electric Current and put it to work. This is my greatest Achievement up to date. Before this it had been necessary to couple my Mechanisms directly to my Prime Sources of Power by means of Belts, Pulleys, Shafts, Gears, etc.

I found that the Electric Current could be transmitted over a wire from its Generator and applied to any Mechanism by means of a Motor. This freed the Machine from its previous Limitations and ushered in the Power Age. I now have excessive quantities of Extraneous Energy available from such sources as Coal, Oil, Gas, Wind and Falling Water. In addition to these sources of Molecular Energy mentioned, I, Technology, have just lately managed to release the Energy of the Atom.

Scientific Knowledge seems to think that there is a limitless source of Extraneous Energy available in the fission of the Atom. The only thing I have achieved with Atoms as yet is to Explode them in the form of Bombs. This Development came out of the high pressure Physical Needs of warfare. I have not yet mastered the Control of Atomic Energy as Power. Even if it can be achieved, the question is what is the use? On the North American Continent Man and I, Technology, already have more Extraneous Energy available than Superstition, Tradition, Greed, Shrewdness, and Venality will permit us to apply.

New World Symphony

In North America I have developed further into the Power Age than anywhere else on Earth. The average Man on the street, however, does not benefit much from it. As late as 1943 A.D., the Records show that 75 percent of the population received less Purchasing Power than is considered sufficient to Buy a decent Standard of Living, i.e., less than \$3,000 a year. That's the Price System for you! Strange as it seems, if the entire Population ever got an adequate Standard of Living under the Price System, the System would collapse at once upon achieving it.

Through the application of Phy-

sical Laws and Extraneous Energy I, Technology, have achieved that Greater Production sought all throughout the ages. Yet scarcity still persists. To be sure it is no longer Natural Scarcity. I killed him off in North America a generation ago. However, through the machinations of Superstition, Tradition, Greed, Shrewdness and Venality he was metamorphosed into Artificially Maintained Scarcity. The net end result in low Living Standards is the same.

Thus, Man is being robbed of the Fruits of Technology, because of the Operating Rules of the Price System. It must maintain Scarcity at all costs, for that is the only Real Physical Factor in its entire Sorry Makeup. They know well that if deprived of Scarcity, their structure will collapse. The General Welfare of the other 98 percent of the Human Components involved is of no importance to the 2 percent who control. Their God is the God of The Market Place.

Their System of Social Life is circumscribed to the business of Producing and Exchanging for a Fat Profit. The Fatter, the better. Therefore I, Technology, am allowed only to Operate as much as is necessary to make Profit out of my Operations. This anti-social Rule of the Price System has held me back. There is, however, a Fatal Contradiction in it for the Price System, for whenever any Economy attains a sizeable application of Technology and Energy, it must constantly Increase that Application. It comes about this way.

Cash Register Blues

The Primary Rules of the Price System are: Buy Low, Sell High, Keep Things Scarce. Its Operating Philosophy is 'Laissez Faire.' This means 'Let Me Alone So I Can Obey The Three Primary Rules.' There are only two sets of Physical Condi-

tions under which it is possible for these Rules to Operate successfully for any Length of Time. The first is under a static Handicraft-Agrarian setup of Human Toil and Hand Tools. The other is when the Price System is in a State of Continuous Expansion. Neither set of Physical Conditions can exist for long after I, Technology, enter the picture.

The three Primary Rules make it compulsory for an Entrepreneur to Operate at a Profit. To do this he must chisel out a Preferential Position for himself in the Market Place. He must Undersell, Outsell, or Out-manipulate his Competitors. They face the same Compulsion. Everyone involved must attempt to Hog as big a share of the Market as possible. The Physical Conditions created by these Compulsions are right up my alley. Underselling, Outselling and Manipulation tend to force the Introduction of more Technology and Energy.

Thus, a curious Thing happens. Business in its attempt to obey its own Three Primary Rules is driven into a direct violation of them. Buy Low, Sell High and Keep Things Scarce are incompatible with Increased Application of Technology and Energy.

In order to Escape the consequences involved, Business is driven to combine into ever larger Units so as to Control the Market. This practice is also a violation of the Primary Rules. The Combining of Businesses into Corporate Trusts and Cartels tends to the introduction of Newer Technology and More Efficient Use of Energy by New Entrepreneurs. Thus, my Impact upon the Ancient Price System Structure continues to mount in effectiveness.

Through Greater Efficiency I, Technology, constantly Reduce the Man-Hours of Labor required for

any one Unit of Production. Business just loves this because it Reduces Unit Labor Costs and Increases Fat Profits by cutting down the Total Man-Hours of Labor necessary. Because of its nature, Business is unable to prevent this process from reducing Total Mass Purchasing Power.

This, of course, is the ability of the Human Components involved to Buy Back the Products of Industry. If Purchasing Ability is not equal to Production Ability, the Market dwindles and Depression sets in. This stimulates the Introduction of more Technology and Energy again. Overall Costs must be reduced in order to Operate at a Profit in a Dwindling Market. The very process of Reducing Overall Costs also reduces Total Mass Purchasing Power still further by driving Total Man-Hours of Labor lower. It seems that Business is now in the Business of putting itself out of Business. Hurray!

No Tickee, No Washee!

Involved with the Lowering of Overall Costs and a Dwindling Market are the necessity to manufacture Cheaper Products and create Artificial Demands. The latter is done by Advertising and other Economic Hocus Pocus. Perhaps, if the Price System could Advertise itself into a System of Trade and Commerce wherein everybody Lived by taking in each other's Washing, its problems would be solved. There would have to be Rigid Standards of Dirtiness. Business couldn't afford to have its Apple Cart upset by Radicals who insisted on keeping too Clean. It would only lead to the Introduction of Technology. In fact, There Ought to be a Law so that it would be unconstitutional to be caught with a Clean Shirt except on Sunday. Three jeers for Good Old Business!

Getting back to our Story, the only way to raise Total Purchasing Ability in proportion to the Decline of Total Man-Hours of Labor is to boost Wage Rates. This increases Unit Costs again and promotes the introduction of More Technology. The efforts of Business to balance Exchange and Profit against Energy and Technology reminds me of a blind man in a dark room chasing a black cat that isn't there.

There are other Fatal Contradictions involved in the Idea of Exchange for Profit, such as: Limitation of Natural Resources, Expansion of Debt, Decline of the Interest Rate, etc. They are too involved to explain here. However, you may rest assured that it is a Physical Impossibility for the Price System to balance Production and Purchasing Power. The nature of its own Operating Rules makes it impossible.

Indeed, it was never interested in that. Such a Functional Idea is foreign to its Purpose. Yet if it does not accomplish it soon, it will destroy itself. That is the Dilemma of the Power Age, which I, Technology, have brought about on the North American Continent.

So far the Price System has evaded this Dilemma by resorting to a series of Stop-Gap Alternatives. Among these are: Government Charity to Business in the form of Fat Contracts, Cost-Plus, Subsidies, Carry-Backs, Government Distribution of Purchasing Power to the Human Components involved so they can Buy the Products of Government-Supported Business, Foreign Wars, Foreign Loans, Installment Buying, Waste and Shoddy Goods. But, it's no use. These alternatives lead only to Higher Taxes, Lower Interest Rates, Greater Debt Loads, Depreciated Credit, Inflation, Deflation and

still Lower Total Mass Purchasing Power. It's like a Habit-Forming Drug, the use of which makes it constantly necessary to increase the dosage to get the Desired Effect.

I, Technology, am reducing the Alternatives faster than they can be adopted. Soon there will be only one alternative. It will be a choice between Science or Chaos. All down through History, I have eliminated Inferior Technologies and Men in favor of Better. It is the Law of my Growth. The Degree of my Application must keep pace with the Stage of my Development. This applies to both the Social and Industrial Field. There is no Recourse anywhere. These laws are inexorable. That is how I MUST Operate.

Oldest Trick In The Book

Since I obtained command of Extraneous Energy I have adopted a new Strategy toward my ancient enemies, Superstition, Tradition, Greed, Shrewdness and Venality. With Scientific Knowledge, I was able to split them against each other. Scientific Knowledge had an irresistible Appeal for Greed, Shrewdness and Venality. They saw an opportunity to use him for still Fatter Profits. In this they have been Successful.

Superstition and Tradition objected. They realized the danger involved. They saw that if Greed, Shrewdness and Venality took Scientific Knowledge on, it would turn into a Frankenstein that eventually would destroy them all. It was no use. The Lure of Fatter Profits was too great. Today, Greed, Shrewdness and Venality have built great Research Laboratories all over the land for Science. In 1900 there were only a baker's dozen of such Kept Institutions in the U.S. Today, there are thousands.

Science does not know that it is playing a Double Dealing Role. Nei-

ther does Greed, Shrewdness and Venality. All four have one-track minds. Science is interested only in the Pursuit of Knowledge for the sake of Knowledge. The other three are interested only in Science as a source of Fatter Profits. They still imagine that they can manipulate Physical Phenomena and maintain the Status Quo at the same time. I, Technology, know that they cannot.

Scientific Knowledge has created marvelous New Jewels out of Pure Science. From their Ivory Towers they hand these gems down to Greed, Shrewdness and Venality. The latter turn them over to me to Convert into Fatter Profits in the Market Place. Brother, how I love to play that Role. Yes, indeed, the chiseling Triplets of the Price System have sold out their ancient alliance with Superstition and Tradition. The Deal was consummated under the blessed banner of High, Low, Close.

I have little left to fear from Greed, Shrewdness and Venality. All they need is more Rope. They are hanging themselves. My real enemies now are Superstition and Tradition. They are inflexibly rooted in that Occult World of the Metaphysical from which emanate Man's worst Fears, and in the Dead Past from which reaches his greatest inhibitions. They hate me, Technology, with an undying hatred. From out of the depths of their Dark Concepts they curse the day I was born.

For at least a half million years Superstition and Tradition have ruled the minds of Men. They are his Natural Born Enemies. They have always restrained him from a Better Existence on this Earth. He, poor fool, doesn't even seem to know it. He cuddles them to his Breast with prayerful fondness and nurses them with the Substance of his Life. All

they ever gave in return was Belief and Opinions. These are the chains that tie Host and Leech together to the Dead Past.

Superstition and Tradition are strong, cunning and devoid of Scruples. They will stop at nothing to overcome Technology. All down through History they have led the Parade in every Counter-Revolutionary movement against the General Welfare of man. They are the Concentrated Essence of the Price System. I know them of old. I know all their Dirty Tricks and Methods. I have grown much Wiser, as well as Stronger, in the last few hundred years.

Nobody Is Perfect

I think that I have it all over Superstition and Tradition in every way, except One. Like Achilles I, Technology, am invulnerable in all but one Spot. That spot is Social Violence. Under those Physical Conditions, I am easily destroyed. In this respect I am Tenuous. Social Violence is my Greatest Weakness. This is even more pronounced in the advanced stage of the Power Age to which I have developed in North America than it ever was before.

Previously my Development was Cruder and Simpler than now. During the early stages of the Industrial Revolution, I became more Complex and Diversified. Even then I was more resistant to Social Violence. My Centers of Production were of necessity close to the centers of my Sources of Primary Power. I had no Secondary Movers then. Consequently, my Structure was more Integrated and easier to defend. Now, it is a different Story.

Since I mastered the Transmission of Power over a Thin Wire, my Centers of Production can operate from Secondary Movers energized from

a distance. This has led to Decentralization of Production to a large extent. This makes me more Tenuous than ever. My Centers of Production are harder to Defend and easier to Destroy. Unless I can devise some Method to overcome this Weakness, I will have to watch my step carefully. Superstition and Tradition grow fat on Social Violence. They have instigated it on Numerous Occasions in the past.

In addition to the Weakness inherent in Decentralization, there is an equally great Weakness involved in the Modern Complexity and Diversification I have attained. My Techniques require Constant Balance and Adjustment between their various Functions. There must be complete and Vertical Control at all times. Let this be disrupted in one part, and the Power goes off, the Lights go out, and the Flow Lines Stop.

I am not revealing any Secrets when I tell this. Superstition and Tradition know it well. Rather am I calling it to the attention of Men because they will benefit from my Continuous Operation and Expansion, and will be the ones to suffer if I am Destroyed. They cannot Live without me. In view of this, I have been forced to advance a Postulate. It is to the effect that: 'Any person or Group advocating Social Violence as a Solution of Social Problems in the Power Age is guilty of Treason against the Continent of North America.'

The showdown between Superstition and Tradition and I, Technology, will come soon. It is long overdue. Social Problems are insoluble within the Framework of the Price System. It has a demonstrated Record of Futility. My Record, on the other hand, shows Accomplishment and Constant Progression in

spite of Interferences. I will not stand alone at the Armageddon of the Price System. I have Volumes of Factual Testimony and many Able Allies on my side.

Always With You

I, Technology, was with that running-walking Ground Ape of the Cenozoic Era, waging his precarious battle for existence with only his Bare Hands and the Sticks and Stones I was able to provide as Tools and Weapons.

I was with that sub-man *Pithecanthropus erectus* who faced up to the terrible sabre-toothed tiger with only a Club and a Stone Knife. Where would he have been without them?

I was with the Neanderthal Man who fought the great cave bear and defied the Last Ice Age with the Fire that I taught him to Conquer and Control.

I was with the Cro-Magnon Man who developed Tribal Life and Organization, who carried my Technology further than it had ever been before and brought Art into the world for the first time.

I was with that Early Neolithic Man who conquered the Cro-Magnon Race to the twang of the Bowstring and the long reach of the Piercing Arrow.

I was with that Late Neolithic Man who mixed Copper and Tin together into Bronze and cast it in Moulds patterned after his best Stone Implements.

I was with that unknown Artisan, at the Dawn of Civilization, who first Smelted Iron in open pits, who later built his Furnace in the side of a hill and still later Invented the Bellows to make his Fire burn better.

I was with that uncredited worker who made the first Bricks and Thin Clay Writing Tablets; and the pedagogue who advanced beyond Picture

Writing and designed the first Wedge-Shaped Syllables.

That was in the world's first-known civilization in the Sumerian City-States of the Euphrates-Tigris Valley. I was with the forgotten Agriculturist of that valley who developed the first Hydrology System of Irrigation Trenches and Canals.

I was with that uncouth Fellow of Ancient Egypt who mastered the Principle of the Lever and designed the first Shadoof to raise Water from the River to pour over his growing crops.

I was with the host of Unsung Artisans and Experimenters of those Ancient Civilizations whose Combined Efforts mastered the principles of my four basic Tools; the Lever, the Inclined Plane, the Wedge, and the Pulley or Wheel.

I was with that slovenly son of a Stone Mason called Socrates who exposed the Beliefs and Opinions of his time to the acid of Intelligence. They killed him for 'corrupting the youth of Athens.'

I was with Democritus 'the laughing philosopher' of ancient Greece, the first Man to suggest the Atomic Theory of Matter. I knew then that 'atoms combined with each other to form different bodies.' However, I did not yet know what composed the Atom.

I was with Hippocrates, the Father of Medicine, who combined Observation, Research and Experiment with Inductive Reasoning for the first time in the Art of Healing.

I was with Ptolmey, natural son of Philip of Macedon, and one of Alexander the Great's Generals, who founded the first University in the world at Alexandria, Egypt. For more than a century Scientific Knowledge blazed brightly there. Of my pupils there Eratosthenes measured the

size of the Earth and missed the correct answer by Only a few hundred miles. That was Good Going then. Hipparchus mapped and catalogued the Stars for the First Time there. Hero devised the world's first Steam Engine there. Archimedes, who excelled in Astronomy, Hydrostatics, Mechanics and Optics, studied there. He invented the Revolving Screw and devised the first Multiple use of Pulleys. Euclid who digested the mathematical principles of Thales, Pythagorus and Eudoxus into the regularity and order of Arithmetic and Geometry, was a pupil. Herophilus began Anatomy there. He showed that the seat of Intelligence was in the brain and not in the heart.

Scientific Knowledge died out in Alexandria after about a century and Pedantry and Philosophy moved in. That was in the 3rd Century B.C. The Library of the Museum was the greatest in the Ancient World. In 390 A.D. one large Section of it was destroyed by Bishop Theophilus. He said it was a seat of Pagan Learning. In 640 A.D. the Mohammedans burned out the rest of it. They said it was not a seat of Mohammedan Learning. It has ever been thus with Authoritarianism.

More Witnesses At The Bar

I was with the Civil and Military Engineers of Ancient Rome who built Sanitary Systems, Bath Houses and the first Central Heating System, the Hypocaust, and who designed Roads and Aqueducts that endure to this day.

I was with Haroun al Raschid, Caliph of Bagdad (763-809) who, after Authoritarianism began to squelch Scientific Knowledge in the Western World, invited Learned Men of all countries to come to Arabia and paid them good salaries. With his reign began the rich and many-sided

intellectual life of Arabia which preserved the Scientific Knowledge of Ancient Greece, added to it and ultimately returned it back to the West.

I was with Roger Bacon (1210-1293), that rebel monk, whose Studies were so successfully buried by Authoritarianism that they were not uncovered for 500 years. He wrote:

Cease to be ruled by dogmas and Authorities; *look at the world!* There are two modes of investigation, through argument and through experiment. Argument does not suffice but experience does. Experiment! Experiment!

For saying that, Roger Bacon spent 20 years in jail, without Writing Materials, Books or Instruments. I, Technology, was there with him.

I was also with the alchemists of the 13th and 14th Centuries. They didn't know it. They pursued Magic. They sought to turn base metals into Gold. They hunted the Grand Elixir that would cure all Diseases. In these pursuits they pried into the Secrets of Nature. They uncovered much Empirical Knowledge about Poisons, Dyes, Glass and Metallurgy. Later, Scientific Method translated much of this Empirical Knowledge into Scientific Knowledge.

I was with that Brilliant Galaxy of Men who pushed back the frontiers of Scientific Knowledge during the 15th and 16th Centuries. There was Leonardo da Vinci, Copernicus, Tycho Brahe, Thomas Digges, Bruno (The Inquisition of Authoritarianism burned him at the stake), William Gilbert, Francis Bacon, Vesalius, Paracelsus, and others. They brought Scientific Method to bear upon Nature and uncovered many of its Physical Laws.

My Name Is Legion

I was with that group of 17th

Century searchers for the Laws by which I must Operate. There was John Kepler, Galileo, Isaac Newton, Harvey, Descartes, Leeuwenhoek, Robert Boyle, Christian Huygens, Toricelli, von Guericke, Malpighi, etc.

During the 18th Century I, Technology, carried my pursuit of Scientific Knowledge still further. There was Coulomb, Hershel, Wilson, James Bernouilli, Laplace, Cavendish, Denis Papin, Black, Priestly, Linnaeus, Hutton, Newcomen, James Watt, Benjamin Thompson, Benjamin Franklin, and Antoine Laurent Lavoisier (1743-1794). Lavoisier took the prefix *al* out of alchemy and founded Modern Chemistry. He was guillotined by Radicals of the French Revolution. In sentencing him, the honorable Judge said: 'The Republic has no use for Men of Science.' His head rolled in the basket and his body was thrown into a nameless grave. But I, Technology, lived on in his work.

In the 19th Century a still greater galaxy of Men came into my Service. Scientific Knowledge was becoming less difficult to accumulate. That was because by now my Researchers stood upon the shoulders of a Growing Number who had gone before and done more primary work. There was von Helmholtz, Joule, Lord Kelvin, Carnot, Clausius, William Thompson, Fraunhofer, Maxwell, Willard Gibbs, Gauss, Volta, Galvani, Ohm, Berzelius, Humphrey Davy, Faraday, John Dalton, Ampere, Mendeleef, Oersted, Arrhenius, Darwin, Pasteur, Koch, Lister, Gregory Mendel, Daimler, Mayer, Hertz, Lyell, Silliman, Audubon, Joseph Henry, Asa Gray, Torrey, Agassiz, Dana, Leidy, Marsh, Cope, Newcomb, Burbank, Osborn, and many others.

Besides this there were countless

thousands of known and Unknown Individuals through whom I advanced. The list is very long. Today, in North America, the Roster of Scientists, Engineers and Technicians, numbers millions. Many of them tower head and shoulders above the greatest names of the past. Scientific Knowledge has grown to Gargantuan Proportions. The advances of all previous history pale into the Kindergarten Class beside the great gains I, Technology, have made in the last 45 years.

'The Felon Days Malinger'

In comparison to this partial list of Great Names who bear witness to the Prodigies that I Have Wrought, how many Witnesses can Superstition and Tradition call upon. How many Prodigies have they wrought in the past that have redounded to the General Welfare of Man.

We Listen closely and Look attentively as Thousands of Centuries march by, one by one, in darkness and silence. From the Pliocene Period, many millions of years ago, to the latest tick of the clock in the 20th Century A.D., we look and listen in vain. Not a solitary Factual Witness comes to the Bar, either Quick or Dead. Superstition and Tradition have wrought only damage to the General Welfare of Man.

Today, with what I know of Physical Laws and with my Stage of Development, it is possible to set up a New and Higher Civilization in North America. I, Technology, have the Men, Machines, Materiel and Know-How. The Blueprint of Social Operations is all ready. This does not apply to the rest of the World as yet. There, for the most part, my Stage of Development has Lagged because of Poverty of Natural Resources and Abundance of Authoritarianism.

In North America I, Technology,

have already created the Framework of this Higher Civilization. It was sponsored in part by Greed, Shrewdness and Venality. They don't know it yet, but North America's great Capacity to Produce, which they encouraged me to build so that they could Extract Fatter Profits from the Market Place, is the Framework of a New Culture within the Shell of the Old. It's Too Late for them to Backtrack out of it now. There is too much Capital Investment at Stake. Once Technology is applied to any extent, a set of Circumstances is set up which forces its Continuous Expansion.

My Real Danger comes from Superstition and Tradition. They would like nothing better than to go back to a Lower Level of Culture when my Stage of Development was simpler. They would like to Freeze Human Society at that level. That is what Fascism is, i.e., a social movement backwards. That is what Authoritarianism wants. In fact, the two are but different names for the same thing. The behaviour they exhibit today is the same shown since they overthrew Ancient Civilization. They have learned nothing New and forgotten nothing Old.

Lately, Superstition and Tradition have been trying hard to make up again with Greed, Shrewdness and Venality. They are pointing out to them the Inevitable Effects of the Impact of Technology upon the Social Order. The lot of them got together recently and waged a bloody World War in an effort to turn the Clock Back. They were beaten on the Battlefield but retired safely to their Political Rostrums, Corporate Offices and Clerical Temples on Both Sides of the battlelines. There they are plotting a still greater Counter-Revolutionary Move.

The Forces of Authoritarianism are

moving into the Social Institutions of the North American Price System. They have made a great deal of progress. Their object is to take over in collaboration with Greed, Shrewdness and Venality and revert everything Backwards. They are preparing to Sell North America down the river of World Fascism under the wings of the Gentle Dove of Peace. The Greatest Sellout of All the Ages is going through the mill right now.

To go backwards is Not the Destiny of North America. That is NOT how We got where we are Today. America became Great through the Expansion of Technology. Her Greater Destiny is to move into a Higher Form of Civilization through a still Greater Expansion of Technology. If you do not believe me, just follow Roger Bacon's advice, 'Look at the world.' Look at your Physical Environment Today. I, Technology, am All Around You.

In My House Are Many Mansions

I am the gigantic Industrial System of North America, the rich Iron, Coal, Copper, Lead, Zinc and other Mines. I am the great Steel Mills which light up the night skies at Pittsburgh and Gary.

I am the railroads running night and day up and down and across this Broad Continent.

I am the Telephone System which links every Home, Office and Plant in North America with every other one and is in Operation 24 hours a day.

I am the great Hydroelectric Dams and the Central Steam Plants that generate Electricity. My Current flows smoothly and silently along the transmission Lines. Interrupt my Flow and you Die.

I am the Radio that transmits Music, News and Propaganda with the speed of Light.

I am the all-seeing eyes of Television. Greed, Shrewdness and Venality have been figuring for a long time how to convert me into Profit. So far, they have not succeeded. That is why you do not have Television yet. The rule of the Price System is that Goods and Services must be Exchanged for Profit.

I am the Sprawling Factories of Detroit, Chicago and many other places. The ingenuity of my Applications there almost knows no bounds.

I am the whirring Presses turning out mountains of Books, Magazines and Newspapers full of the Propaganda of the Price System. Their content is no concern of mine. I only work there.

I am the fleet of Barges and Boats that ply up and down North America's inland waterways, from the Panama Canal to the Arctic Ocean.

I am the gleaming Passenger Planes flying from ocean to ocean in seven hours, and the Helicopter which flies forwards, backwards, up, down and sidewise.

I am the Agricultural Machinery of North America which produces an abundance of Cereals, Fruits, Vegetables and Meat. When your Ability to Buy my Products falls too low, they are sprayed with Poison, Plowed Under, Killed or Dumped in the ocean. Artificial Scarcity must be maintained at all costs now that Natural Scarcity is dead. You wouldn't want the System of Exchange for Fat Profits to Collapse, now, would you?

I am the great Textile plants that weave on Automatic Looms. I am the Synthetic Rubber Plants turning out a Product superior to Nature's best.

I am the New Synthetic and Plastic Industry turning out Products that don't even exist in Nature.

I am the Chemical Industry rearranging the Molecule and Atom, the

better to suit the Functions that Man needs fulfilling.

I am High Frequency Induction Heating, the Super-finished Part, High Tolerance Specifications and the Deep Freeze.

I am Wood Technology, Light Metals, Ferrous and non-Ferrous Alloys, I am the Tungsten Carbide Cutting Edge. What a far cry from the Stone Knife of *Homo Neanderthalensis*. I came every Foot of that long way.

I am Electrification of Industry, Mechanization of Farming, Hydroponics and Agrotechnology. I am Automatic Mechanisms, the Photo Electric Cell and Electronic Controls, making possible Large Scale Operations in any Field of Production. My Processes will work just as well in the Field of Distribution.

I am the Spreading Network of Highways reaching into every County in the Land. I am the Automobile, the Motorcycle, the Bus and the rugged Jeep speeding along from town to town. I am the tireless Trucks poking their powerful eyes through the night from New York to Kansas City to California.

I am the beautiful Steel Towers reaching into the sky above congested Cities from coast to coast.

I am almost 2,000,000 Machine Tools and the 1,500,000,000 Installed Horse Power of Prime Moving Engines in North America.

Half Slave and Half Free

I am the Scientist in his Ivory Tower, turning out his wondrous jewels. I am the Engineer applying Mathematical Principles to Natural Forces. I am the Technician supervising the machines of Industry. I am the Army of Skilled Personnel in all Fields of Production, attending my Mechanisms, maintaining them and Functioning on their Assembly Lines.

I am the Engineer's Flow Line Chart of Production; and the Mechanics' Blueprint of Operation.

I often wish that these Men in My Service could lift their eyes from the Rut they are in long enough to Catch On To The Idea of the importance of a Blueprint for Social Operations too. They'd better, soon.

I am the entire Agricultural, Mining, Manufacturing, Transportation and Communication Flow Line Sequences of North America, from the Raw Material to the Finished Product.

I am the Technological Processes of Production in every Field of Industry. In these, 'the work is moved past the individual, and the human being employed no longer participates in any part of the process as a contributor of human effort to the actual production, but is only there as an operator to stop and start the technological process and to set up the original standards of operation. A technological process after it is thrown into operation by human instigation, controls all operations, all degrees of accuracy, and all dimensions by the rate of flow of goods and services.'

Technology today is something new under the Sun. It is the integration of Scientific Knowledge into a New Entirety of production of Physical Wealth, together with the social effects and conclusions inherent therein. The Whole forms an overall Process of Social Evolution that is unidirectional and irreversible. It never happened before and it can't happen twice in any one Area. This Social Process projects its own Polity of Control and Administration.

So far I have not been permitted to operate much in the Fields of Education, Public Health, Housing, Social Relations and Distribution in general. These are still mostly the Domain of Superstition, Tradition, Greed,

Shrewdness and Venality. That is why they are in such a Mess all the time.

I, Technology, have solved the Problem of Production. I cannot work at my Peak of Efficiency, however, until the Problem of Distribution is turned over to me also. I can solve it as well. My Past Record and my Present Stage of Development constitutes a Certified Promise to that effect.

It was I, Technology, who organized the Great Industry of North America for War. I could do it just as easily for Peace. I flooded the World with Food and Weapons. I designed a host of New Mechanisms for the fight against fascism. Among my more spectacular achievements were the Precision Bomb Sight, Radar Detection, the Proximity Fuse and the Terrible Atom Bomb. I, Technology, would just as soon turn out Peaceful Goods and Services. It is not I who dictate how I must Operate.

It's Up To You!

I am still imprisoned within the Framework of the Price System. Those who control it manipulate the Stop and Go Lights. I only work there.

If you want me to turn out Abundance, Distribution, Leisure, Equal Opportunity for ALL and Security, from Birth to Death, I can do the job. It's up to YOU.

If you would like to see the Degree of my Application brought up to a plane equal with my Stage of Development, it's up to YOU.

If you would like to see the Young Ones, our New Citizens coming into this life, open their eyes on a Land devoid of Beggars, Crooks, Charity,

Chicanery, Chiseling and Profit, it's up to YOU.

If you would like to see your Children growing up in a Land of Equal Opportunity free from discrimination of Race, Creed or Color, it's Up to YOU.

If you would like to see North America inhabited by a race of Stalwart People with Intelligence and Integrity, It's up to YOU.

If you would like to see the Old Folks taken care of Adequately and Humanely before they close their tired eyes to rest forever, It's up to YOU.

If you would like to take out the Biggest Insurance Policy in the world for Yourself and Family and leave a Legacy beyond Price to the Loved Ones you must leave behind when you, too, pass beyond the veil, It's up to YOU.

You cannot have any of these Desires met under the Tyranny and Regimentation of the Price System. It just does not work that way.

In the Field of Social Operations, however, all things are possible to Technology. I will do whatever YOU want me to do.

All YOU have to do is to install Technological Social Controls in accord with the Physical Laws by which I must Operate. I can't do it. It's up to YOU.

If you will set me Free from within the Framework of the Price System, I will build Right Here in North America the Richest and Fairest Civilization the Sun ever shone upon.

It will be the First Human Culture in the sorry history of Man, organized and operated for the Prime Function of LIVING. Would you like that? Well, It's Up to YOU!

I AM TECHNOLOGY!

From Here on Out

Keep Your Eye On The Trends

by R. F. Novalis

Increasing Trends..		All-Time LOW	Latest HIGH Figures*
1. DEBT (U. S. Govt.) per person.....	January 1, 1840 \$0.21		\$1,939.00
2. ENFORCED LEISURE (unemployment.....	October 1944—\$30,000		1,830,000
3. MACHINE TOOLS in use** (cumulative total).....	1925.....	700,000	1,800,600
4. BANK LIQUIDITY (percent deposits to reserves, Federal Reserve Banks).....	1921.....	60.0%	98.00%
5. GOVT. (U. S.) BONDS to total bank invest- ments (Federal Reserve Banks).....	1929.....	39.0%	94.00%
6. GOVT. (U. S.) BONDS to total life insurance investments	1915.....	0005%	60.10%
Decreasing Trends		All-Time HIGH	Latest LOW Figures*
1. PRODUCTION (combined factory-mine-railroad freight) Index basis 1919-20 monthly aver- ages equal 100	Oct.-Nov. 1943—250		187.
2. MAN-HOURS WORKED (total of man-hours in factory-mine-railroad) (Note: 1919-20 month- ly average was 2.54 billion) Actual number.....	Oct.-Nov. 1943 3.14 billion		2.45 billion
3. MAN-HOURS PER UNIT in above industries, combined average	1919-20=100		40%
4. ENFORCED SCARCITY (load factor on installed capacity of above industries)	No Figures		22%
5. INTEREST RATES (combined average yield on Govt.-municipal-corporate bonds)	1919-20 6.12%		1.70%
6. OSCILLATION DOWNWARD of factory output since all-time peak (Oct.-Nov. 1943).....			37%
* November-December, 1945			
** No figures available on number of machine tools scrapped			
Ed. Note: See January-February "Great Lakes Technocrat" for detailed explanation of this table			

* Note: Figure on Item 6 of Decreasing Trends in January-February issue Volume 3, No. 8, page 24 should have read 22½ drop instead of 40.

Bet You Didn't Know This

A very clever and extremely useful machine has been on the market for some time and which has not been given proper publicity or credit. The machine takes very little room and is propelled by means of a pedal attachment, by means of which a fulcrum lever converts a vertical reciprocal motion into a circular movement.

The principal part of the machine is a huge disc that revolves in a vertical plane. Power is applied through the axis of the disc and work is done on the periphery, where the hardest steel, by mere contact, may be reduced to any shape.

The machine is called a grindstone.

(*Machinists Monthly Journal*, November 1945.)

There are only 11 steam boilers in the entire world capable of generating 1,000,000 pounds of steam per hour. Each one is as wide as a four-lane highway, as tall as an 8 story building and burns a carload (45 tons) of pulverized coal every hour. One of these units can heat 10,000 average dwellings in the winter time, figured on a basis of 100 lbs. of steam per hour per dwelling. Where are these giant generating plants? In Asia? No! In Africa? No! In Europe? No! In South America? No! They're all right here in the U.S.A. (From an ad by Combustion Engineering in *Fortune*, January 1946.)

From the Camera's Eyevew

A World of Technology

Watch The Facts March By

Let's attend a Technocracy meeting. Here is one that was held at Maccabee's Auditorium, Detroit, on January 27, 1946. Barney Ocasek, Authorized Technocracy Speaker of Section 15, R. D. 8141, Cleveland is on the platform.

It is fashionable these days to talk about 'One World.' Every 'right-thinker' in the land, whether politician, pulpiteer, or private enterpriser, is hard at it now. This Speaker goes them all one better. He is analyzing the two worlds that exist side by side under the Price System. These are: 1) The old world of toil and scarcity with the ignorance, insecurity and low degree of General Welfare it produces. 2) The new world of power and abundance, with its emerging high culture of science and technology which is struggling to be born. The old world of toil and scarcity, like the poor of Holy Writ, has always been with us. In fact, one produced the other, and vice versa. The new world of science will outlaw these ancient dictums of the Price System.

As we take our seats, the Speaker is telling almost half a thousand Americans about the social aspect of science. This vital subject is taboo in the 'free press' and the little (or big) red school house. It is anti-Price System. That's why it's taboo. That's why Americans go to Technocracy meetings. They want the facts. The Speaker talks about the physical factors that shape our common destinies. These facts dictate a new concept of citizenship so that when events demand social change, we may avoid chaos and move out of the old Price System world into the new world of science. Technology is the means whereby we live. After all, most people like to live, don't you think? The catch to it is that to live in an Age of Power, we must learn how. The time in which to learn is short. If we do not learn now, the time in which to suffer will be long. Here are a few scenes from the new world of Technology.

(continued on page 32)

ACS Photo, R. D. 8141



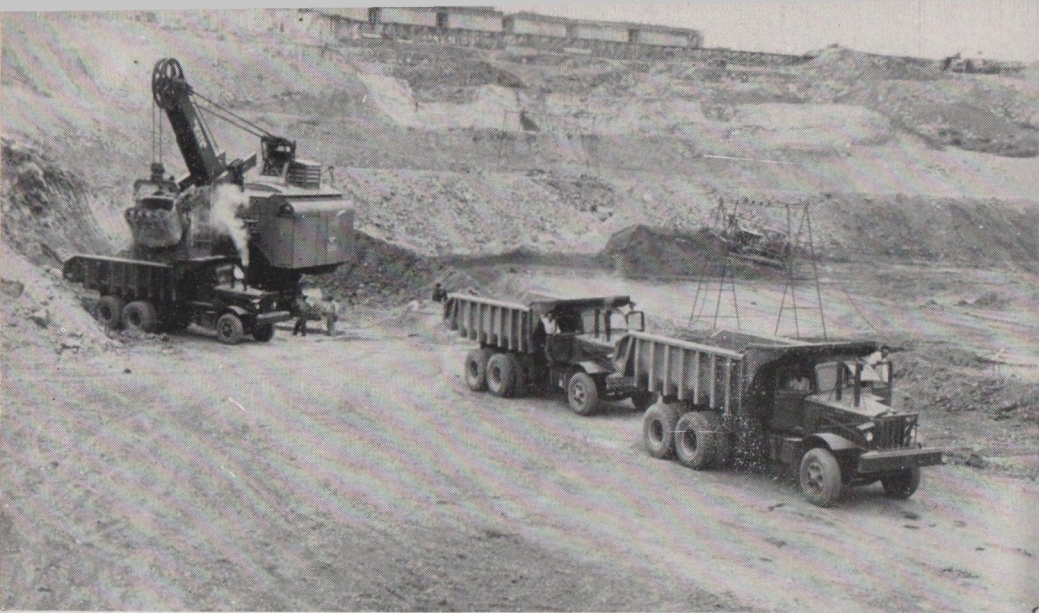


Photo: Mack Trucks Inc.

Resources, energy, technology are at the base of the Power Age. Iron ore is primary. In 1939 trucks hauled only a few hundred thousand tons of iron ore. In 1944 they hauled 50,000,000 tons. These 30 ton trucks have lowered open pit mining costs and helped to set new production records. Each truck can haul 2,160 tons of ore every 24 hours. How many wheelbarrows would that take?

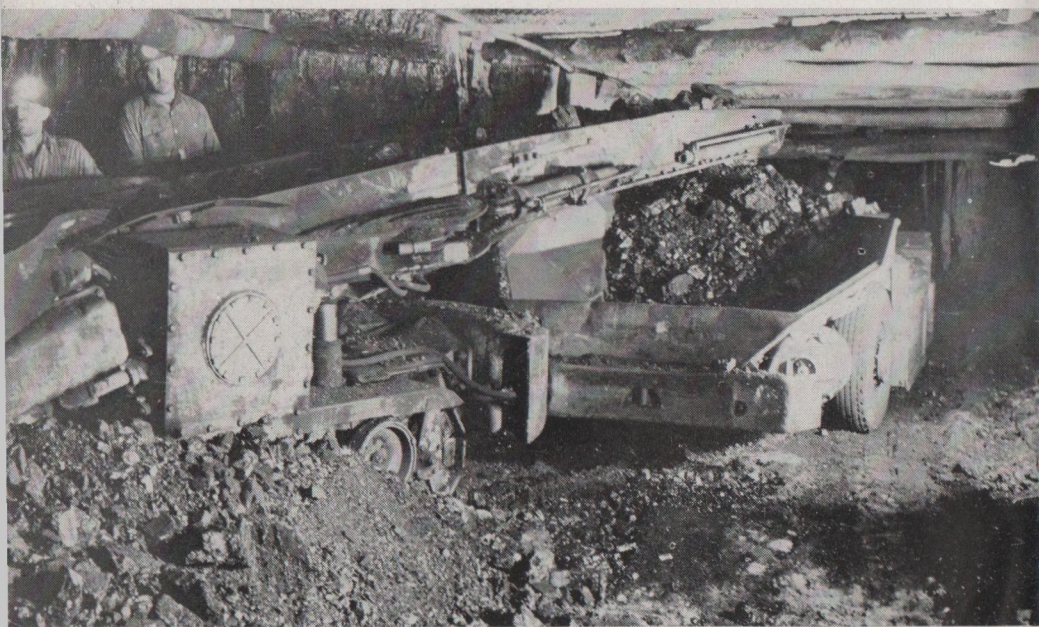


Photo: Joy Manufacturing Company

Without coal the iron ore wouldn't be much good. Here's a mechanical loader and shuttle car. Mechanical loading in soft coal mines has risen 11,300 percent in the last 22 years. The ad said:— 'if mechanization was not profitable operators would have given it up years ago.—conserves man-hours —increases output—facts speak for themselves.' Correct. It's a fact that technology is imperative.

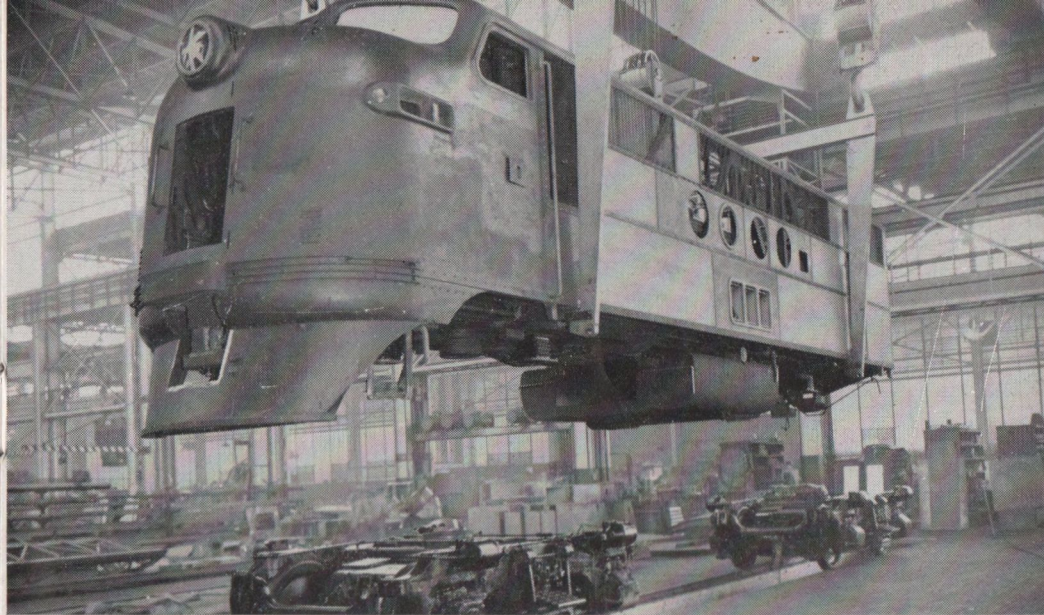


Photo: General Motors Corporation

Transportation is the life blood of production and distribution. Disrupt it and industry collapses. Improve it and we're all better off. Here's some definite improvement. It is a 2,000 hp, 30-ton Diesel locomotive-body being lowered to its trucks by the world's largest 200 ton welded crane. The body combines 70,000 finished parts into a symphony of power. This is technology.

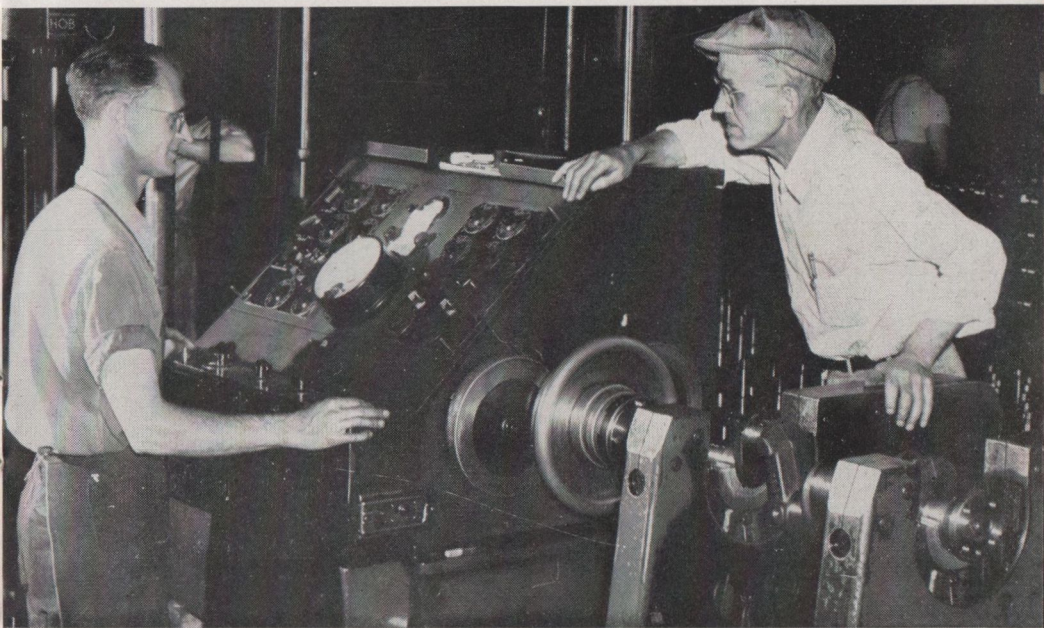


Photo: International Harvester Company

Here is a technological process. This machine automatically measures and locates static and dynamic unbalance in crankshafts by measurement of centrifugal force vibrations. In 20 seconds it locates unbalance so small as to cause movement of less than .000025" of a work piece at its bearing. One man replaces 7 formerly needed for this important test. Technology dooms toil and skill.

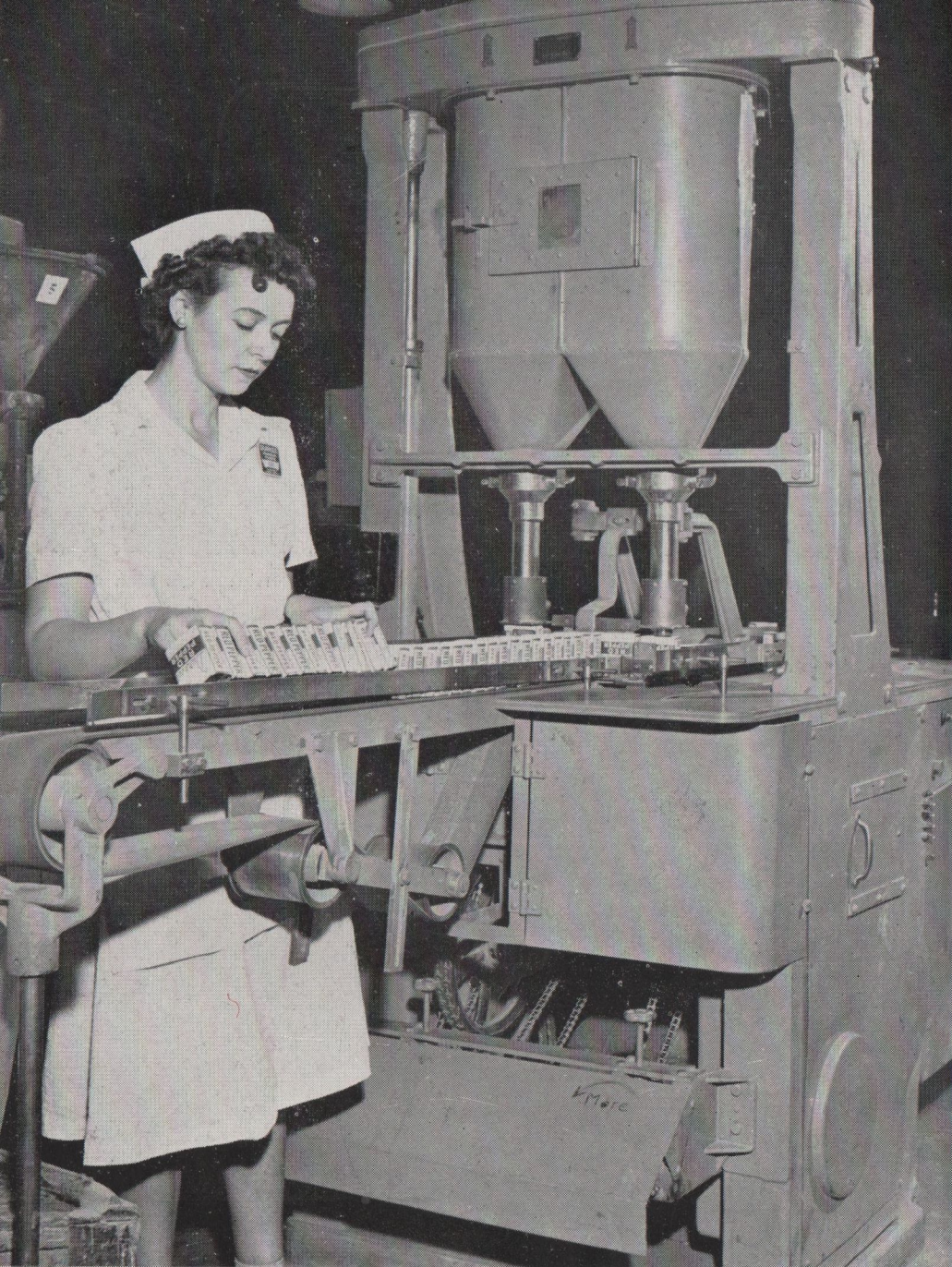


Photo: Stokes and Smith Company

Technology, is it for women too? Of course! They're the better 50 percent of the human race, aren't they? Here's an attendant feeding empty containers into an Automatic Duplex Auger Filling Machine. The unit fills a container every second with any kind of powdered or granular products used for foods, groceries, drugs, chemicals, etc. The fill is precise and clean. Goodbye, guess work.



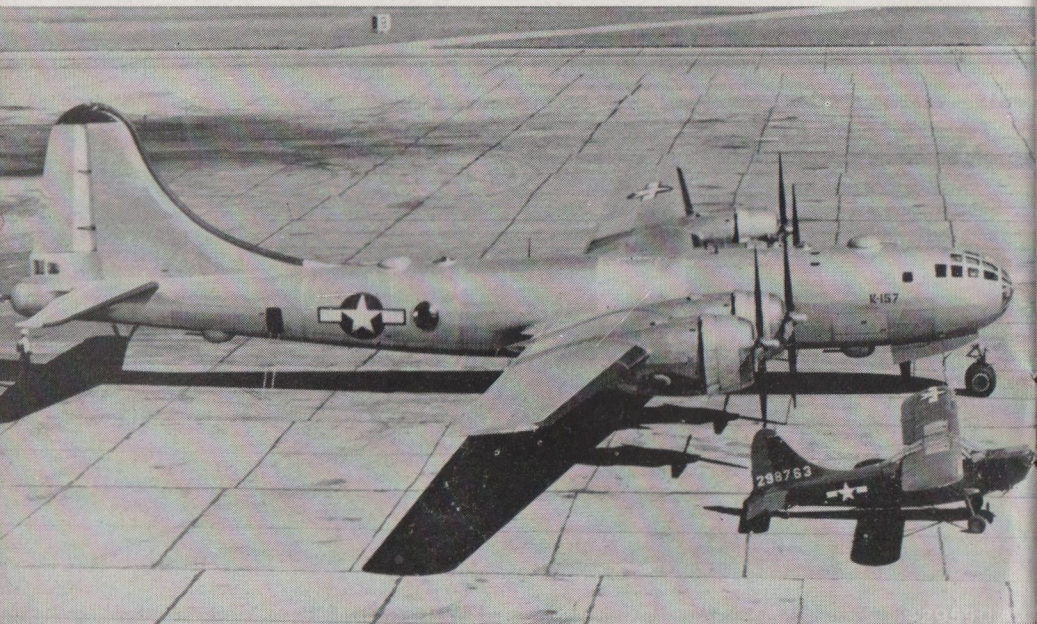
Photo: Towmotor Corporation

Power is the great equalizer, the common denominator of this age. Women can control it as well as men. Installing Towmotors in this plant packaging food products for overseas shipment cut the man-hours involved in handling operations 61 percent. This lady, with power, raises a pallet of 20 bags weighing 1600 lbs. and stores it neatly on a platform 7' above the floor. Goodbye toil.



Photo: International Harvester Company

Design is the essence of technology. Here's the giant TD-24, 17 foot, 18 ton TracTracTor and the little 8 foot, 1050 lb. Farmall Cub. Each one is designed for its job. The Cub with 10 hp is designed for the 2,000,000 farms of less than 40 acres. It has a full line of attachable implements. The TD-24 is equal to the power demands of large scale farm projects, earth moving or lumbering.



Official Photo USAAF

Another sample of design, a B-29 bomber and a tiny liaison type plane. Engineers understand about design. The right kind of engineers understand that if a social system is to operate for the General Welfare, it must be designed for the job. Any intelligent North American can know that much. Technocracy has the design for a scientific social-industrial system. It will distribute abundance.



ACS Photo. R. D. 8141

A scene from another Technocracy meeting. It's at the Portage Hotel, Akron, January 20 1946. John Spittler, Authorized Technocracy Speaker of Section 1, R. D. 8342, Detroit, is on the platform. His theme is "70,000,000 jobs." In the Orient every coolie has a 'job.' If we want 70,000,000 'jobs' here, we have to take fascism too. Technology dictates a minimum of toil for abundance.



Photo: Maryland Casualty Company

When a house of cards collapses the top cards fall farther and harder than the rest. Get the idea? The issue before North America today is not 'One World' or how to make the atom behave. It is the adoption of technological social controls, or chaos. There is top insurance against social chaos waiting to be taken out. If we don't take it out, it's going to get very tough in the good old U.S.A. soon.



ACS Photo, R. D. 3141

'Knights of Energy'

(continued from page 25)

Now the talking is finished and the time for action has come. Here are the sign-up tables at the Ocasek meeting. About 10 percent of the audience decide they want to do something about it. That's why they're joining Technocracy. They will go through the Technocracy Study Course. There they will get a fundamental orientation in the scientific approach to social problems. They will analyze the Price System and discover exactly why it stinks. They will also analyze the synthesis of Technocracy and the concept of Technological social controls. This knowledge is not available anywhere else in North America except through prodigious effort and long years of searching study. It cannot be bought for love or money. Technocracy provides it free to all members.

Technocrats know that there is only one world worth striving for. It is the world of power, technology and science. The only alternative is social fascism. Just recently a quarter of a million young Americans gave up their lives in a war against social fascism. Remember? They didn't die for a Price System 'One World' of superstition, ignorance, disease, toil, scarcity and insecurity. That's the ideal of international fascism. That's the apotheosis of the ancient Price System. That's the only kind of a 'One World' it is physically possible for the Price System to set up. Our boys didn't die for that, did they? Then what else could it have been for, except the America that has been a dream in everyman's heart for generations; the America that was always becoming but never quite became the reality of that dream. They died to make it possible for us, who live, to make that dream come true. How about it, Mr. and Mrs. America?

Do you want to see your own country sold into social fascism? Are you sick of muddling, futility, hypocrisy, sophistry and moronic statesmanship? Are you fed up with snares and delusions; tired of chasing Price System rainbows? Do you want to do something about it to help yourself and fellowman? Then join an Organization where your efforts will count. The place to begin 'saving the world' is in North America. If America goes down, world civilization is doomed. The motherland of technology is here. The 'brotherhood of man' begins at home. Let's usher in the new world of abundance for all right here. **INVESTIGATE TECHNOCRACY.**

Primer of Technocracy

The Engineers' Full Production Program

By George Moody Wolfe, 12247-7

How Full Production Is Now Prevented

When people want goods and are able to buy, then the more plentiful the goods are, the lower prices they bring.

Whenever goods are produced to be sold for profit, *abundance must be prevented*. If all goods were abundant, like air and in many places water, then nothing could be sold for any price. So, of course, profits would not be possible.

Producers and dealers for profit MUST try to keep the selling prices of their goods high enough and the costs, which include the wages of their employees, low enough to make profits. If prices are too high or wages too low, many consumers are unable to buy enough goods. If prices are too low or wages and other costs too high, many producers and dealers are unable to make profits. So they MUST shut down business and disemploy their men.

Producers and dealers save costs of production and handling not only by paying low wages but also by employing machines instead of men, thus producing more goods for sale, while fewer consumers are permitted to earn money to buy them.

It is not possible for competitive private enterprise to secure maximum production because competition is enormously wasteful and also because many private owners are not able to afford the most efficient machinery.

Private enterprise prevents abundance by a number of devices. Among these are the fabrication of inferior

articles, monopoly controls, high prices, restricted production, buried patents, cartel agreements and well-planned waste.

Whenever more goods are produced for sale than can be sold at a profit, they MUST be destroyed or stored to keep the market supply scarce, prices high, and profits possible. Then producers MUST stop or slow down production and disemploy men.

The Government then borrows money to scantily support and to pacify the unemployed and their dependents. It also loans money to producers to help them buy more efficient machinery, to disemploy more men for the Government to support.

Government debts increase taxes while both business men and the unemployed workers are made less able to pay taxes. Government debts are increasing faster than population or the national income while employment in industry goes down.

If permitted, the Price System will disemploy so many millions that the Government will not be able to support them either with direct relief or by employment on public works. This will further reduce consumers' buying power, lessen the demand for production, cause more industries to shut down and disemploy still more men. If continued, there will be a complete breakdown both of business and Government, with starvation, violence and chaos.

How To Obtain Full Production

Ever since 1920, even through the Great Depression, America had and now has sufficient resources and ma-

chinery to produce and distribute plenty of all necessary goods for all of us. As long as the resources and machinery are privately owned, however, there will be produced only as much as the owners hope to sell at a profit. In order to secure freedom to produce a full supply for consumers, the resources and machinery must be owned by a national partnership of all consumers.

Machinery must be made to do as much work for us as machinery can do, and the work that human beings only can do must be divided evenly among all persons between certain age limits.

Costs of goods will be measured by the amount of NON-HUMAN ENERGY used to produce and distribute them. The total amount of such ENERGY available for use will be apportioned periodically, as follows:

1. For Overhead Costs: Production of productive equipment; support and education of all under working age; support of all inmates in institutions; all other free goods and services, maintenance and renewal of productive equipment.

2. For production and distribution of goods and services for all others of working age and over.

This last portion of the available non-human energy will be paid out evenly among all persons in this class. Each will receive ENERGY CERTIFICATES, with which he may purchase as great a share of goods and services of his own choice as his share of the available energy will produce and distribute.

Daily reports of consumers' demands will indicate the rate of production necessary for a full supply without overproduction or under production. It will be a Balanced Load System.

The Energy Certificate will make

hoarding of purchasing power for future security unnecessary and impossible. Energy Certificates will be non-transferrable, non-negotiable, non-interest bearing, non-savable, and good only during the stated 2-year production period.

All taxes will be abolished. The cost of public services, for which taxes are levied under a Price System, will be met by deducting that cost from the total available energy (see Item 1 above) as a part of Overhead Costs.

There will be no debts, rents or profits. All useful goods and services for which individuals pay money in a Price System will be distributed directly on the basis of their cost in energy. The need for transferable money has passed in North America.

Most of our exported surplus goods will be exchanged for goods of which we cannot produce enough. For some we shall receive money of the foreign countries. Americans who wish to travel in those countries may exchange some of their Energy Certificates for the foreign money and whatever money they have left when they return to North America, they may then exchange for Energy Certificates.

Many kinds of goods and services will be produced in so great an abundance and at so small cost per unit that it will be more economical to distribute them free, and record the total bulk costs as overhead, than to compute the costs per unit and record the amount distributed to each individual consumer. Among the numerous free services will be health services, local travel and communication, use of assembly halls, admission to all public assemblies, complete education, and possibly water, light and power for homes.

The various industries and services will be classified into departments with

local and regional controls as needed. Responsibilities and duties will be clearly defined. Workers will be employed in their chosen occupations and locations and graded according to proven fitness. Unpleasant jobs will be eliminated or upgraded. Persons of working age whose Price System occupations are abolished when the new system is set up will be reemployed in lines for which they are fitted, on the basis of qualifications.

The officers of each department will be selected by officers above them in the same department who know them and their record. All employed persons will be directing or performing work not for limited wages for themselves or for the profit of private employers but for the benefit of all citizens who need the goods and services being produced. They must work efficiently in order to hold their rank. Besides, the more efficiently they all work the greater will be the general abundance which all will share.

Refusal to work, that is refusal to participate in necessary production, will not be tolerated. People who do not want to work will have their heads examined by competent psychiatrists. There will be no bums, either high-class or low-class.

The directors of all departments together will constitute a general control board, whose chairman subject to removal will be the chief executive, bound to serve the entire nation.

Social Effects of Full Production

By an assurance of plenty for all, the chief causes of greed, graft, bribery, blackmail, extortion, official favoritism, fraud, theft, personal discord, class distinctions, conflicting class and sectional interests will be removed. Without transferable money, there CANNOT be any black markets, kidnaping for ransom, gambling for purchasing power, traffic in vice or

injurious products, or profiteering in war. Thus, the Engineers' Design for Full Production and Direct Distribution will indirectly eliminate more than 95 per cent of all crimes and set up a pattern of human relations which will favor and encourage morality, goodwill and brotherly conduct. The chief purpose of social controls will not be to tell people what they must not do, but will be to discover and carry out most efficiently and economically what the people want done.

The purpose of this whole program is to serve all individuals as fully as possible. Whenever a consumer spends his Energy Certificate, he will VOTE for the goods and services that he himself wants, and he will get them if it is possible to produce and deliver them.

The fullest possible personal liberty, consistent with the general safety and welfare, depends upon an assurance of continuous plenty for all. Plenty for all can be secured, not by wishing or moralizing, not by a political government even with a form and pretense of democracy trying to regulate competitive private enterprise which cannot distribute plenty, but by public enterprise with a concerted Full Production Program managed by competent technicians who know how to get big jobs done.

As we increase production, while lessening the need for human labor, an important purpose of the New Education will be instruction in the beneficial use of leisure time.

There will be full freedom of belief, assembly and expression consistent with the General Welfare. There will be full scope for ingenuity, individual initiative and competition in useful services, cultural activities, hobbies, games and sports, but no freedom for gaining economic advantage and domination over fellow citizens.

No individual, young or old, married or single, will be dependent upon any other individual for material support. No one will be compelled for the sake of a living to submit to any other person's harsh domination or to live or associate with any one who is persistently abusive, offensive or repulsive.

Marriageable persons will be free to choose mates according to mutual attraction, to set up homes and to have children with full assurance of their support.

Discrimination in any form against individuals or minority groups on a basis of race, religion or color will be severely prohibited. All citizens will be guaranteed equal opportunity to advance.

Thus ALL of the unattained ideals of political democracy, i.e., plenty, security and personal liberty, will be attained in the fullest possible measure without any need for political parties, campaigns, petitions, lobbying or general elections.

Furthermore, with full production America, the richest nation in the world, will be more able than ever before to give needed help to less favored nations.

For this Program we do not need to wait for anybody's moral reformation; only for the people to recognize the necessity of working together with competent leaders.

THIS IS TECHNOCRACY!

They Saw the New America

'Into the discovery of the proximity fuse and its fashioning went the work of from 600 to 800 scientists—physicists, chemists, astronomers, electrical engineers.

'At the top was a co-ordinating force that pulled it together—the center of this remarkable nervous system linking so many first-rate minds with so many different skills. The Office of Scientific Research and Development kept in touch with all the scientific projects covering every phase of war research.

'The tieup with industry was very close. Industrial technicians and researchers were in on the whole project. The Navy gave it unlimited backing.

'Nothing like this has ever happened before. Here is the pattern for the solution of all man's life, if only we had the courage to use it in peace as in war.

'Who can say how long it would take to discover the cause and the cure of cancer or infantile paralysis with 600 or 800 men and women working together toward a common goal?

'As these scientists talk about their work, you catch a glimpse of this other world of infinite possibilities. They have seen it. For a brief time, working under the stress of national peril, they've been a part of it.

'And now that peace has broken out, they are seeing it disintegrate. The coherence and the strength that were in it are running away like quicksilver. You can hardly believe that it ever existed.

'Having had a vision of another way of life, they are more aware than most of us of the conflicts and distortions of what we laughingly call normalcy.'—Marquis Childs in his column in the *Chicago Daily Times*, September 29, 1945.

'Nine-tenths of the thinking in America is directed against the interest of 90 percent of the American people.'—Marlene Dietrich, movie star. (As quoted by the *American Freeman*, April 1946.)

Technocracy and Your Trade

The Flour and Grain-Mill Worker

By Organization Division 8741-1

'Down By The Old Mill Stream'

Bread and grain products contribute more than 25 percent of the calories and protein in the national diet or almost as much as is derived from meat, poultry, game and fish combined. This fact makes the Flour Mill and Grain Products Industry an important segment of America's technological structure.

The outstanding characteristic of the industry, according to the Bureau of Labor Statistics, 'is the small amount of labor, relative to output, required in the milling process. This is due to the fact that the machinery is nearly automatic, requiring few attendants.' The Census of Manufactures reveals that in 1937 the industry rated 73rd in a list of 105 industries, as an employer of labor, but was exceeded by only 8 larger industries in the amount of electric energy used per man-hour of labor.

The Flour and Grain-Mill Products industry includes establishments engaged in the manufacture of flour, meal and feed from wheat, corn and other grains. The Census of Manufactures limits the definition to 'merchant' mills which purchase grain, process it and sell the products. It does not include establishments manufacturing mixed feeds or cereal preparations or those grinding grain on a contract basis. The latter are called 'custom' or 'grist' mills. Merchant mills account for over 95 percent of all grinding operations.

'There Was A Jolly Miller'

T.N.E.C. Monograph No. 7 has the following to say of the social per-

formance of the industry. First, let us repeat part of T.N.E.C.'s definition of social performance. 'The acid test of business is not the profit-and-loss statement but the social audit.' By this is meant 'maximum production of goods and services; maximum consumption; maximum payrolls; minimum cost (to consumers); maximum employment; full utilization of capacity.' These factors are all measurable. Now how does the Flour Milling Industry rate?

Monograph No. 7 states that, 'In the flour and grain-milling industry all trends have declined from 1919 to the present day' (1940). Here are some excerpts from its analysis:

'... employment and payrolls exhibit a downward tendency throughout. ... payrolls have, if anything, declined faster than employment and ... faster than the number of dollars which the industry absorbed from the public. Not so the dividends and interest payments.

... from 1927 to 1929 although production remained the same, employment went down 10 percent and payrolls were off nearly 7 percent. Dividends and interest increased 20 percent and nearly 9 percent more was taken from consumers.

... in 1935, dividends and interest had declined less than 7 percent from the 1927 level while production had gone down more than one-sixth and payrolls more than one-fourth. The industry, in short, seems to have done its best to pay out dividends

and interest. A priori one would expect that the consumption and production of flour would be the one to hold up best in hard times. It would seem to be the kind of article that people would have to buy. Interestingly enough it declined nearly 20 percent during the depression. One would expect a priori that this industry would have given consumers steadily more for their money. Instead, as the figures show, the industry did not permit its product to decline in prices faster than the declines that occurred in wages and in prices in general.

'Oh Wad Some Power —'

So much for the social performance of the flour milling industry. It is plain that the industry has been a nice, fat cow for its owners. No social blame attaches to them, the T.N.E.C. report to the contrary notwithstanding. The type of anti-social behaviour exhibited here is in strict accord with the Operating Rules of the Price System.

The cardinal rule of this system is to grab all you can hog and jar loose with as little as you have to. We all exist under that type of a social system, don't we? We all unite in maintaining it, don't we? We all try to excel under it, don't we? Then what else do you expect? The Price System is geared to the interests of the few. Then, you may ask, where does the Flour and Grain-Mill Products Worker come in? Well, let's have a look at the other side of the record.

Technology Will Out

The peak number of establishments in the industry was reached in 1909 when there were 11,691 plants. By 1939, thirty years later, 9548 of

them had permanently retired from the Price system, leaving only 2,143 still operating. The peak of employment was reached in 1919 with 45,481 workers. By 1939, twenty years later, 20,710 of them had been permanently retired from the industry to enforced leisure with scarcity. In 1909 the 11,691 plants and the 39,453 workers of that year produced 105,757,000 barrels of wheat flour. Thirty years later, in 1939, 9,548 less plants and 14,682 less workers produced 5,612,000 more barrels of flour.

1919 was the peak year in production of wheat flour when over 132,000,000 barrels were turned out. If we take 1929 to equal 100, then in 1919 production stood at 110.9, man-hours at 172.5, output per man-hour at 64.3 and labor cost per unit of output at 130.7.

By 1939 production declined to 90.8 and man-hours to 84.3. But output per man-hour rose to 107.7 and labor cost per unit declined to 96.9. This adds up to only one conclusion. Technology had been hard at work in the industry. The proof is in the breakdown.

During the period there was about an 18 percent drop in production. To compensate the harried owners of the industry, however, the labor cost per unit of output dropped about 26 percent and total man-hours of labor bought and paid for fell about 51 percent, while that good old angel of free enterprise output per man-hour rose about 40 percent. Could anything be sweeter?

Who cares whether the nation consumed 20 percent less flour products during the long depression? Who cares whether the purchasing power of Flour Mill workers fell 52 percent? Who cares that over 46 percent of them were technologically displaced

between 1919 and 1939? Who, indeed, cares about the 'social audit' of the Price System or any part of it so long as pickings are good? As long as the cash register tinkles its merry tune, social problems can go hang. Who cares?

There is a great deal more to be said about the Flour and Grain-Mill Industry and its workers. Space limitations forbid us from telling the full story. It has been told, however, in the authoritative reports of the Bureau of Labor Statistics, the National Research Project of the W.P.A. and in the T.N.E.C. reports, from which the data here cited has been drawn. Any one who can read may get the full story there. However, there is one more aspect of the impact of technology upon the Flour and Grain-Mill Products Industry that should be mentioned.

Unfinished Business

The Bureau of Labor Statistics says that: 'The milling equipment in use today is largely automatic even in the smaller establishments. Virtually all basic machinery used in flour milling was fully developed prior to the period covered by the present study. The few improvements after 1919 were for the most part of minor importance.' Technology is not yet finished with the flour milling industry. Two major fields remain unconquered. These are a higher degree of concentration and integration in the industry with larger plants where technology can be applied on a greater scale and the introduction of more automatic packaging machinery. There is great activity in both fields.

In 1921 five large companies milled about 23 percent of the total output. By 1935 just 3 companies milled 29 percent of all production. Centralization of baking facilities has also

worked in favor of large mills. Other factors are at work activizing the impact of technology. Among these are a shift in the centers of the industry from the Northwest to Buffalo, Kansas City, and points in Oklahoma. This favors the building of new mills with better technologies than those of the older milling centers.

One manufacturer of packaging equipment advertises as follows: 'What! Grandma in the packaging room? Yes. And doing a Bang-Up Job, Too.' The ad pictures a One-man (or woman) bagging unit that will 'weigh, fill, pack, checkweigh and sew five 100 lb. bags of feed a minute.' There's 'no lifting of filled bags.' The 'entire job requires only placing empty bags in bag holder, releasing filled bags and guiding them through sewing machine.' The weighing and packing is automatic. No skilled help wanted. To point up the Price System compulsion involved, the ad concludes as follows: 'A 4 oz. overweight per bag on 8,000 tons a month equals a dead loss of \$1000 every 30 days. Accuracy or Loss.'

Percentage Favors The House

That's the point, all right, accuracy or loss. It would be an accurate statement to say that the Flour and Grain-Mill Products Worker is playing in a game where the cards are marked and stacked against him. He hasn't got a Chinaman's chance. What of it if hourly wages in the industry are higher than they've ever been, if these are paid out to an increasingly smaller number of workers. It's the total mass purchasing power that counts in overall social results. Technology has advanced to the point in this industry where a handful of giant mills, operating around the clock, can supply all North America with an abundance of flour products.

Under the tyranny and regimenta-

tion of the Price System the advances of technology spell out a loss to the human components of the system. They mean a loss in employment opportunities, standard of living and General Welfare. A few always benefit. That's the way a Price System works. What if employment did rise somewhat during the war? It must be plain to even the most obtuse coupon clipper by now that this world war is over and there isn't much chance of getting another one under way for some time.

Oh, Tempora! Oh, Technology!

In the meantime technology hammers away at the Flour Industry. All the feather-bedding schemes of labor leaders and all the monopoly conspiracies of good old 'free enterprise' cannot stop it. The process is unidirectional, irreversible, irresistible and self-perpetuating. It affects all North Americans, among which are included the flour industry workers. Where are the 20,710 workers displaced between 1919 and 1939? Some are dead. The rest are eking out a precarious existence in other lines and making conditions tougher for the workers there. We have been illustrating the American social dilemma of the Power Age, high-lighted by one industry. There is a solution to this common problem.

The solution which is compulsory is not a political, moral or financial prescription. These are all futile in the face of advancing technology. The remedy consists in a complete overhauling of the entire social system and a redesigning of it along engineering instead of business lines. The remedy is the application of scientific principles to social problems. The solution of the employment and social problems of the flour industry worker is tied up with the overall solution of the modern American social problem as a whole.

In the last 25 years a Body of Thought has been built up in North America, which is specifically oriented toward such a scientific solution of social problems. It has been examined, tested and retested by the aristocracy of brains in North America and found to be adequate. This Body of Thought is known as Technocracy. Technocracy is neither anti-labor, anti-capital or anti-government. It is purely and simply pro-scientific, which means in the last analysis that it is pro-humanity. After all, nearly all the worthwhile things in modern civilization came about through Science. That is the cue for every North American. Mr. Flour worker, it's getting very, late. It's high time for you to wake up.

INVESTIGATE TECHNOCRACY!

Judiciously Speaking

'By concentration of Governmental power and drafts upon the Federal Treasury, we have now a financially "busted" great piled-up mass of Governmental confusion beyond human comprehension; impossible of democratic control, extravagant, wasteful, inefficient, and by its nature, the instrumentality of favoritism, tyranny, oppression, and corruption, and

the destroyer of the self-reliance and self-respect and Governmental capacity of the people, qualities without which no people can remain free.'—Representative Hatton W. Summers (Dem. Texas), Chairman of the House Judiciary Committee, and veteran of 34 years in Congress (*New York Times*, March 10, 1946.)

Technology Marches On

Kilowatt-Hours or Man-Hours

By Research Division, 8741-1

Making Machines Creates Jobs?

One of the pet 'come-backs' you always hear when the subject of technological disemployment is discussed, is the one that goes like this:

Well, maybe machines do take away jobs, *but it still takes men to make those machines . . .* Ha!

That this has been known to be a fallacy, by Technocrats, for well over a decade has still not convinced many well-meaning but fact-lacking Americans. So here are the facts, based on data found in the latest (1939) census of manufactures.

Those who offer this perennial denial of machines, any machines, causing permanent disemployment, attempt to prove it by mere 'logic,' simply because it is obvious that men are still doing work in the machine tool factories, the plants that turn out tractors, etc., ad nauseum. If pressed, they may admit that there are exceptions to their rule, but the total effect 'comes out even,' or maybe a net disemployment so small as to not upset their pet theory in the slightest.

Machine tools, being the only 'machines that make other machines' can be taken as a criterion because they are

recognized as the spawners of mechanization, sharing the basis of our Power Age with the turbines in our utility plants, which latter drive the tools. Of course, the 'come back' sometimes includes tractors, Diesel locomotives, and other job-displacing machines, but the machine tool is even the progenitor of these.

Well, *is there* a net disemployment? Do machine tools, taking the best example, cause more unemployment than they require in their own production?

The most effective and final way to answer those questions and settle this previously perplexing (to some people) poser, is to determine what is the proportion of human toil to extraneous energy in that industry as a whole. How many man-hours were worked compared with the amount of power used from coal, oil, gas, and electricity.

United States Machine Tool Industry—1939

Total employment: 36,600 wage earners.

Average hours per week per man: 43

Total man-hours: 81,640,000.

Power Consumed

Converted into British Thermal Units

Bituminous coal	3,880,220,000,000
Petroleum	1,602,600,000,000
Electric power	359,366,000,000 (purchased)
Manufactured and mixed gas	221,000,000,000
Anthracite coal	156,400,000,000
Natural gas	141,255,000,000

Total 6,360,841,000,000 BTU

This total is the equivalent (at 3,411 BTU- 1 kw-hr) of 1,865,000-000 kilowatt-hours,

Which, in turn, is the equivalent (at standard engineering rate of 13 man-hours - 1 kw-hr) of 24,245,-000,000 man-hours of work performed by extraneous energy,

Which, in turn, is exactly 300 times the amount of energy expended by all the man-hours put in by all the men in our machine tool plants.

Now, have you any more posers, please?

Ed. Note: See *Man-Hours and Distribution*, pages 7 to 16.

The American Way

'S. H. Williston, vice president in charge of operations of the Cordero Mining Co. of Nevada, recently explained the differences between the American and Spanish Quicksilver operations. He pointed out that Spanish ore is high grade, about 180 pounds of quicksilver to the ore ton. United States ore is low grade, about 10 pounds to the ore ton.

'Spain uses 2200 men to operate a 200 ton a day plant—10 men or more to a ton a day. United States mines, even with low grade ore (but because of efficient operations) use only one man to three tons of ore. Spain's highest yearly wage is \$240, while the United States' average is \$2400 a year.' (*Mining Record*, January 10, 1946.) Ed. Note: See *Science v. Chaos*, page 8.

'The Compleat Angler'

A new fish canning machine is enlarging the hearts and pocketbooks of the Columbia River Packers Association at Astoria, Oregon. Each machine displaces about 17 men. The mechanism was invented by E. H. Carruthers of Warrenton, Oregon, a former Cornell University professor. It is called the 'Pak-C-Lector.'

Strange to relate, up to six years ago there wasn't a single tuna packing plant on the Northwest Pacific Coast. Now a score of canneries handle a tonnage approaching that of Southern California.

Just why tuna weren't caught in Northwest waters until 1936 is a mystery. The chances are they've been running there for thousands of years in the Japanese Current which flows about 100 miles off the Oregon coast. Its waters overage 52 to 60 degrees Fahrenheit, which is about 10 degrees higher than the surrounding ocean.

Tuna fish run in that broad stream of warm water in great schools. Not much is known about the tuna fish except that it spawns at sea and appears off the Northwest coast about mid-summer. The Northwest tuna is a different species from that caught in the south. It is called the Albacore and is said to be the tastiest of the tuna family with exceptionally white meat. Albacore fetches double the average price of other tuna. In 1937, the first tuna-fishing season, over 1,000,000 pounds were caught. In 1944 the catch was over 33,000,000 pounds. Albacores run from 10 to 30 pounds in weight each. Packing capacity in the Northwest is now large enough to handle all the catch.

The 'Pak-C-Lector' automatically sorts and weighs the tuna slices and packs them into a can. It puts a half pound of fish in each can with mathematical precision. 'Prime asset, however, is the economy of manpower. Three machines run by six operators can pack double the quantity of tuna that can be handled by a 28-operator hand line.' (*Wall Street Journal*, January 5, 1945.) Ed. Note: See *Technocracy Study Course*, bottom half page 151, page 152 and top two-thirds of page 153.

Read All About It!

The Serveu Vendor Company of Berkeley, California has announced a weather-tight coin-vending machine for selling newspapers. The unit requires no school kids, cripples or old men in attendance. Its maker says that the device can be adjusted to handle publications of different sizes. The machine turns down tokens and magnetic slugs and can be equipped with a change maker when it vends papers that sell for less than a nickel. (*Business Week*, December 29, 1945.) Ed Note: We feel like giving up on this one but try looking at page 9 of *The Technocrat*, January 1939.

Then and Now

The Bureau of Agricultural Economics in a recent report summarized the comparison between typical family operated farms in the hard winter wheat belt as they were in the five years before World War I, and the five years before World War II. The report emphasizes that the farms studied are typical of the area but not average farms since many farmers have not modernized.

THEN

Typical Farm
1913-1918

Size—330 acres

Acres of wheat.....	180 acres
Production of wheat.....	1836 bu.
Investment in work animals.....	\$805
Investment in machinery.....	\$472
Farms with tractors.....	None —

NOW

Typical Farm
1938-1942

Size—660 acres

Acres of wheat.....	330 acres
Production of wheat.....	3687 bu.
Investment in work animals.....	\$108
Investment in machinery.....	\$1,680
Farms with tractors.....	99%

'What has brought about the astounding gains in farm productivity in the last thirty years? How did farmers manage to forge ahead in wartime, turning out a third more production with at least fifteen per cent less effective labor than in pre-war years?'

Secretary of Agriculture Anderson comments on these questions of his own as follows:

'The answer encompasses thousands of items of research, invention and development of new farm skills. Under broad headings they include such things as increased mechanization, greater use of fer-

tilizer and lime, a good start in conservation-type farming, improved control of pests and disease, better feeding of livestock. *Outstanding is power.* (Italics ours.) It is estimated that in 1940 our farms had in one form or another more than 174,000,000 mechanical horsepower, including one and a half million tractors. Today farmers have about two million tractors—a gain of more than 40 per cent during the war.' (*U.S.D.A. Clip Sheet*, January 6, 1946.) Ed. Note: See *Technocracy Study Course*, bottom of page 256 and pages 257 to 260.

Shade of Lord Salisbury

Richard Groetchen, a Chicago engineer, has invented a rotary machine for cooking steaks, chops, fish and fowl. Before going into manufacture, he tried it out on the public. He bought a restaurant in Chicago and installed one of his machines in the kitchen. The machine is an enclosed unit about the height of an average man, and a yard in diameter. An endless conveyor goes around and around inside, at pre-set speeds, depending on what is being cooked. Rare, medium or well-done orders can be cooked automatically by adjusting the rate of speed of the conveyor and the intensity of the gas flames.

Each order is placed in a pre-heated metal casserole so as to sear it and retain all juices. The casseroles are put in through a window on one side and after being carried around on the conveyor come out a door on the far side ready to serve. Cooking is accomplished by two banks of specially made ceramic fire tiles upon which the gas flames play. The cooking takes place under reflected heat at 800 degrees Fahrenheit.

Gas and air are pre-mixed before being blown into the burners. Thus, there is said to be no carbon-monoxide in the cooking chamber. A one-sixth horsepower motor operates the conveyors. The Groetchen rotary cooker is a time, labor, fat, food, spoilage and waste saving device. One man can turn out 2500 short orders in 12 hours. Oh, yes, the machine cooks hamburgers, too. (*Chicago Daily News*, November 15, 1945.) Ed. Note: See *Northwest Technocrat*, Volume 9, Number 100, page 7.

Each in His Own Tongue

By Publications Division 8741-1

Voice of The Price System

Poor Little Rich Feller

A large qualification should be necessary for membership in the upper house in order to represent the principle of property. The rights of the minority must be protected, and the rich are always fewer in number than the poor.

John A. Macdonald, first Premier of Canada, at the Conferences on Confederation of British North America, held at Quebec between October 10 and 29, 1864. (As reported in the *Chicago Tribune*, November 12, 1945.)

That'll Be \$5.00 Please

It should be perfectly clear to everyone that regimentation always leads to totalitarianism, and it always begins under one guise or another with medical practice. Since when have our people become so dependent as to need security from the cradle to the grave.

Dr. Herman L. Kretschmer, former president of the American Medical Association, before the House of Delegates of the AMA at the Palmer House December 2, 1945. (As reported in the *Chicago Daily News*, December 3, 1945.)

Maybe They Started The War Too

If the OPA deliberately had devised a scheme to bring about a housing shortage it couldn't have done a better job.

Arthur W. Binns, president of the National Real Estate Foundation, before a member's meeting of the Chicago Real Estate Board, January 9, 1946. (As reported in the *Chicago Daily News*, January 10, 1946.)

Talking Jackass

The law of supply and demand is a divine God-given law. The sooner we let God's laws operate without human interference, the sooner we will have prosperity.

Congressman Dudley G. Roe (Dem. Md.) speaking in the House in opposition to a provision giving the OPA an appropriation to combat black markets and racketeering. (As reported by *Labor*, February 23, 1946.)

Maybe They're Zombies

Never in 22 years as an undertaker have I seen the like of it. People keep coming in and asking if maybe someone's died and left a nice apartment empty. It don't seem nice, exactly, but I guess people get so hard up they'll try anything.

Bill O'Hara, Chicago undertaker, in a press interview. (As reported in a story in the *Chicago Daily Times*, December 16, 1945.)

Double or Nothing

Only last night a man came in to see if any of the dead had left apartments. He offered me \$50 if I could give him a tip.

I've got two kids and need an apartment myself.

J. Weinstein, Chicago undertaker, in a press interview. (As reported in a story in the *Chicago Daily Times*, December 16, 1945.)

How About Foxholes?

You can't find anything in the Constitution that says the government has to build houses for the citizens. The real estate business naturally and properly belongs to the real estate men.

Congressman Fritz Lanham (Dem. Tex.) Chairman of the House Committee on Public Buildings and Grounds, in a speech before the United States Savings and Loan League. (As reported by the *Washington Star*, November 28, 1942.)

Planning The Post-War Gravy

'... said housing or any part thereof shall not, unless specifically authorized by Congress, be

conveyed to any public or private agency organized for slum clearance or to provide subsidized housing for persons of low income.

Section IV of the Lanham Act of 1941, providing for war housing. (As quoted in *The Nation*, January 5, 1946.)

It's A Long Road

Let it be laid down in the first place, that humanity must remain as it is. . . . Unequal fortune is a necessary result of inequality of condition. To suffer and endure is therefore the lot of humanity; let men try as they may, no strength and no artifice will ever succeed in banishing from human life the troubles that beset it.

Pope Leo XIII in his encyclical *Rerum Novarum*. (As quoted by the *Converted Catholic*, March 1946.)



Voice of Technology

He Ought To Know

The only difference between a politician and a statesman is that a statesman can read and write.

Richard R. Nacy, executive vice-chairman of the Democratic National Committee, to a meeting of downstate Democrats at Springfield, Illinois. (As reported in the *Chicago Daily Times*, January 18, 1946.)

How About 'Free Enterprise'?

A free country is one in which there is no particular individual to blame for the existing tyranny.

Mickey Rooney, movie star. (As

quoted by the *American Freeman*, May 1946.)

They Call It A Job Trust

As long as organized labor insists on following a policy of spreading scarcity . . . instead of helping to produce and share abundance, neither the shipping nor any other industry in America stands much chance of meeting the great challenge facing the capitalistic economy today.

Senator Joseph R. Ball (Rep. Minn.) in a speech to the 19th annual meeting of the Propellor Club of the United States and the American Mer-

chant Marine Conference, October 18, 1945. (As quoted in the *Chicago Sun*, October 19, 1945.)

Go To The Head Of The Class

The control of any discovery which may vitally affect the lives of all of the people can only be adequate and satisfactory, if it is designed solely for the welfare of all the people. For example, the release of atomic energy was accomplished by the efforts of all of our nuclear physicists and of many hundreds of other scientists, engineers and technicians, most of them trained in our nation's schools, colleges, universities and laboratories. . . . The point is that the discovery was, in the broadcast sense, the result of a collective endeavor by all of our peoples.

Senator Brien McMahon (Dem. Conn.) Chairman Senate Special Committee on atomic energy, in an article in the *New York Times Magazine*, February 24, 1946.

It Can Be Measured

Democracy as we know it is a political institution of the eighteenth century handed down by middle class traders who wore periwigs and wrote with quill pens. 'Life, liberty and the pursuit of happiness,' still expresses the aspirations of this democracy. It is the problem of our time to reconcile the formula with social and technological trends that cannot be arrested.

Waldemar Kaempffert, science editor *New York Times* in an article in *Tomorrow*, January 1946.

America Has The Men

America, which came into ex-

istence after the Dark Ages, has always shown an almost religious respect for human inventiveness. It has been maligned for its technological enthusiasm, but it has discovered and proclaimed the power and joy of engines, skyscrapers, planes, electricity, of cleanliness and health, of harnessed energy and cheap production and distribution of goods. America needs leadership which is equal to our present standards of scientific knowledge and progress.

Dr. Martin Gumbert, a New York physician and writer, in an article in *The Nation*, January 5, 1946.

Remember Lot's Wife?

After all, the liberal economic views of Pope Leo's Encyclical on Labor, the Bishop's Program of Social Reconstruction, and the Statement of the Archbishops and Bishops of the Administrative Board of the N.C.W.C. are more conservative than the views and politics to which they are opposed, *for they go back in spirit and essence to the Middle Ages.* (Italics theirs)

From the official textbook, *Catholic (Roman Principles of Politics*, page 167, written by the late Msgr. John A. Ryan. (As quoted by the *Converted Catholic*, March 1946.)

Weight of Opinion

'Abraham Lincoln, worn out by the appeals of two rival seekers for a minor office, weighed their petition papers and appointed the man whose references were the heavier.'—Ernest Hix in *Strange As It Seems*, *Chicago Sun*, September 13, 1945.

So Wags the World

Fascism (Social Reaction)

vs.

Anti-Fascism (Social Advancement)

By Research Staff Great Lakes Technocrat

North America

United States

Last September a poll was taken in the U. S. Army stationed in Germany to uncover the soldiers' attitude towards Nazism. The poll included 1700 soldiers and officers said to represent a true cross-section of the Army. Here are some of the results.

Twelve percent of those interviewed said they believed some races were superior or inferior by nature. Another 16 percent were undecided on this point. Nineteen percent believed the Germans had some justification for starting the war. Twenty-two percent believed that Hitler had 'good reasons' for persecuting the Jews. Twenty-four percent said the Germans had 'very good' or 'fairly good' arguments in claiming that since Germany was the most efficient country in Europe she had the right to a controlling influence on the Continent. Twenty-eight percent agreed with some of the Germans' explanations as to why they went to war. Twenty-nine percent said they had grown 'more favorable' toward Germany since coming to the country. Thirty percent said they liked the Germans better than the English or French. Finally, 51 percent said they thought Hitler had done Germany a lot of good before the war.

Commenting on this evidence of lack of correct orientation in the American Army, Dr. Isador Lubin, statistician and former associate mem-

ber of the United States reparations commission, had the following to say:

I am not at all surprised at these results. They are testimony to the failure of the orientation work of our Army. Apparently our orientation specialists never did impress upon our boys just what it was they were fighting against or what it was that they were fighting for. They were not given a picture of what Nazism really was or what it stood for.

The only trouble with Dr. Lubin's analysis is that it doesn't dig deep enough. The U. S. Army's Information and Education Department is not responsible for this pro-fascist sabotage of the mental attitudes of our soldiers. The Army Orientation Course got off to a good start. It prepared and put out some excellent programs. Navy officials were so impressed that they asked for the material for the Navy.

A scientific and impartial analysis of the race question titled *Races of Mankind* was written for the Orientation Course by outstanding anthropologists. It was suppressed by order of the House Military Affairs Committee after some copies had been issued.

On March 24, 1945, the Army issued Orientation Fact Sheet #64, an 8-page leaflet, analyzing fascism. Here are a few excerpts:

... Fascism is a way to run a

country . . . it's the way Italy was run, and the way Germany and Japan are run. Fascism is the precise opposite of democracy. The people run democratic governments, but fascist governments run the people. . . . Fascism is government by the few and for the few. . . . The objective is seizure and control of the economic, political, social, and cultural life of the state. Anyone who is not a member of their inner gang has to do what he is told. They permit no civil liberties, no equality before the law. . . . They make their own rules and change them when they choose. . . . They maintain themselves in power by use of force combined with propaganda based on primitive ideas of 'blood' and 'race' by skillful manipulation of fear and hate, and by false promises of security.

Fact Sheet #64 was distributed to all U. S. service installations throughout the world. Then the pro-fascists at home got busy. Indignant speeches were made on the floor of Congress. The Chief Counsel of the House Military Affairs Committee demanded an explanation from top Army officials. The Information and Education Department of the Army was shaken down. Topnotch personnel were transferred to other duties where they could have no chance to furnish facts to the rank and file of the Armed Forces. The Orientation Course was thoroughly emasculated. After this shake-up at the top, Fact Sheet #64 did not get much emphasis any more. Is it any wonder that American soldiers did not 'know the score' when they got to Germany? Chalk up one victory for pro-fascism at home.

J. I. Yellot, director of research of the locomotive development committee sponsored by a group of railroads in conjunction with the Bituminous Coal Institute, predicted recently that the gas turbine will soon become an important factor in railroad technology.

Experiments have been successfully made with coal burning gas turbines at the Institute of Gas Technology, Chicago; Johns Hopkins University, Baltimore; and the Battelle Memorial Institute, Columbus. Coal is pulverized to the consistency of fine talcum powder. Says Mr. Yellot:

The burning of the coal under pressure is accomplished with the aid of simple equipment resembling in principle the aircraft jet propulsion compressors. The removal of the fly ash in the form of a dry powder is achieved by the use of a battery of small mechanical cyclone separators.

He said that 'the high thermal efficiency of the gas turbine will reduce the coal requirements of a typical locomotive to about 25 percent of the consumption of the standard steam locomotive.' Maintenance costs of operating a gas turbine locomotive will also be much lower than for a diesel or steam engine.

Super-alloys for use in jet engines and gas turbines were recently shown at the 27th National Metal Exposition at Cleveland. 'All told there are about a dozen outstanding new alloys that could not have been made before the war.' Some of these contain high percentages of cobalt, chromium and nickel for heat resistance.

The new super-alloys fall, roughly, into three classes, forged, wrought and

cast. The forged alloys are designed to stand temperatures up to 1300° F. The wrought alloys are for parts that operate up to 1500° F. The cast alloys are said to show promise of service up to 1900° F. Super-alloys developed in this country are far superior to those employed in Germany.

Canada

A brown caterpillar called the spruce budworm has infested one-third of Canada's forest area. The infested territory extends in a belt about 300 miles wide and a thousand miles long, reaching from the Manitoba border to the St. Maurice River in Quebec. About 250,000 square miles of forest land are involved. The worm is eating its way through Canada's forests three times faster than trees are being cut down by logging operations.

Forest experts say there is little hope of preventing the spread of the blight in two or three years into Maine and the Maritime provinces of Eastern Canada. The spruce budworm is a native of North America. It feeds on the new, green growth of balsam and spruce and on the buds at the tips of branches. In two years a tree is stripped and killed.

Forestry ranks fourth among Canadian industries. Thus, the spruce budworm blight is a direct threat to the future of Canada. C. D. Howe, reconstruction minister, calls it a 'national disaster.' The Canadian Pulp and Paper Association thinks the worm may have destroyed enough pulpwood in the last 10 years to make \$8,000,000,000 worth of paper. Paper is Canada's most important export.

Forest experts suggest that the blight was brought on by commercial logging practices of the last 150 years. These cut away the pine and spruce leaving the less commercially valu-

able balsam. Being thus favored, the balsam multiplied. Since balsam is the spruce budworm's choicest meal, the worm also multiplied. Immense damage to the physical resources of Canada is resulting because business upset the dynamic equilibrium of nature in its sacred pursuit of 'free enterprise.' Chalk up another victory for pro-fascism at home.

Approximately 60,000 additional horsepower will be added in 1946 to Canada's present 10,000,000 hp of available hydro-electric energy. In the last 13 years the amount of electrical energy generated in Canada has more than doubled. About half of this increase occurred since 1939. The manufacturing and mining industries used about three-fourths of the power generated by central stations. Electric motors do four-fifths of all the work in these industries. In the mining industry there was a 500 percent increase in electric motors operated between 1933 and 1940. Latest figures indicate that over 9 kilowatt-hours of electricity are consumed in the manufacturing and mining industry for every man-hour of labor employed. Four-fifths of Canada's potential water power is still undeveloped.

A Technical Information Service has been set up by the Canadian Government. Hundreds of scientists and technicians will be put to work solving problems for Canadian industry. Inquiries are said to be coming in at the rate of 30 a week. Some typical inquiries are:

Can oxychloride cement be used for kitchen drainboards? What's the newest process for making concrete building blocks? How do you recover iron and titanium white from titaniferrous ores?

South of The Rio Grande

Argentina

Thirteen 'top secret' Nazi documents captured in Berlin were recently released by the State Department. They were made public in Buenos Aires by John Moors Cabot, U. S. Charge d'affaires there. The papers were sent to Berlin by Erich Otto Meyhen, German embassy charge d'affaires, after the German ambassador left Argentina. They furnish proof of Nazi connections with the Peron machine.

Most of the subsidized newspapers and newspapermen in Argentina, working for Peron now, are the same ones who were formerly subsidized by Hitler's government. Among others, the documents revealed that *El Pueblo*, a Buenos Aires Catholic (Roman) newspaper, was subsidized monthly in Reichsmarks to the tune of \$990. Charge d'affaires Cabot said that *El Pueblo* was never placed on the blacklist out of courtesy to the church.

Mexico

In 1910 the population of Mexico was 12,000,000. Today it is 21,000,000. Two-thirds of the people live on the land yet 'fail by a wide margin to feed themselves and the city dwellers.' Mexico imports corn from Argentina, wheat from Canada and rice and sugar. However, the country is making strong efforts to industrialize. Progress can be reported in the establishment of irrigation projects, the building of hydroelectric plants and the elimination of illiteracy.

Over 100 irrigation projects are under construction at the present time. These will bring under cultivation about 25,000,000 acres of cropland. A hydroelectric plant nearing completion on the Atoyac River near Puebla will furnish 20,000 horsepower. This plant, and others, are counted on to furnish power for the country's industrialization program.

By special act of the government, every person between 18 and 60 able to read and write is held responsible for teaching one illiterate how to read and write. The drive was launched in March 1945 under the slogan, 'Everyone Teach One.' Minister of Education Jaime Torres Bodet, has carried the project to every corner of Mexico.

By the end of 1945 almost 48,000 'collective centers' of teaching had been established with public funds. Another 17,000 were sponsored by private citizens. Ten million copies of a primer have been printed and distributed. A recent count showed almost 2,000,000 persons enrolled in anti-illiteracy schools. Within the first 6 months almost 300,000 passed their exams and graduated.

The 1,500,000 Indians, speaking over 20 different dialects, are a special problem. Bilingual primers in Spanish and dialect are used for them. Instruction is given all illiterates in reading, writing, spelling, arithmetic, history and natural science. Minister Bodet reported the 1945 budget allowances for education to be the highest in Mexico's history. A large number of permanent schools are also under construction.

Europe

Germany

The Potsdam agreement, signed by Britain, U. S. and Russia, provided that Nazi assets would be seized wherever found and used to help pay reparations. When the Allied Control Council was set up in Germany, it was assigned the responsibility of finding these assets. The Council agreed to quadripartite action by U. S., Britain, France, and Russia, in the search for and seizure of hidden Nazi assets. The Council felt that the participation of Russia would be desirable even though the Soviets' share of German reparations had already been decided by the Big Three at Potsdam.

There was no question involved as to how the funds would be distributed. All assets would be under the control of the Council to be distributed later to nations claiming reparations. The only point involved in the quadripartite agreement was who should be authorized to seek out the assets. To implement this decision, the Allied Control Council promulgated its law No. 5, covering this point. Nevertheless, the Soviet Union has been neatly frozen out of the search for assets in western Europe. Here's how they did it.

The U. S. State Department, in the Fall of 1945, instructed Lt. General Lucius D. Clay, Chief of the U. S. Military Government, and Russel Nixon, deputy director of the division of investigation of cartels and external assets of AMG, to seek a 'division of labor' agreement with Russia whereby the Western powers would keep out of the search for German assets in Eastern Europe in return for Russia's keeping out of the search in Western Europe. Both Clay and Nixon objected. Nixon exposed

the plan and called it a 'dirty deal.' The State Department backed down and told them to drop the subject. It had a better plan.

Early last Winter, the Paris Conference on Reparations was held to discuss the division of German assets other than those already earmarked for the Soviet Union and Poland. For this reason Russia did not participate.

Holland, Belgium, Denmark, Luxembourg, Czechoslovakia and Norway were represented. A paragraph was slipped into the agreement which gave each of the signatory nations, which included the above, the right to search for hidden Nazi assets within their own boundaries and seize them for reparations. This stipulation of the Paris Conference was contrary to law No. 5 of the Allied Control Council. Under the Council law, Russia would be included in the search. Under the Paris Act, she is excluded. General Clay told a press conference on February 26, 1946, that he had been instructed to vote for an amendment to law No. 5, bringing it in line with the Paris Act.

In the meantime, Russel A. Nixon resigned and came back to this country. He was asked to testify by the Kilgore Committee on war mobilization. Quoth Mr. Nixon:

If Russia were allowed to join in it would lay bare the Fascist or reactionary regimes in countries such as Spain, Portugal, Switzerland, Sweden and Argentina and would reveal all the elements of collaboration of certain interests in the allied countries with these regimes.

As the plot now stands, Russia has

the dominant voice with regard to Nazi assets in Bulgaria, Hungary, Romania, Finland and Eastern Austria. All other external Nazi assets, including those overseas, are being handled by Britain, France and the U. S. However, no matter who gets what, a large part, if not the most, German assets are safe under cover in Sweden, Switzerland, Spain, Portugal, Turkey and Argentina, outside the orbit of the United Nations. They planned it that way.

In Sweden there are 233 German owned firms; in Switzerland 214; in Spain 112; in Portugal 58 and 35 in Turkey, according to testimony given the Kilgore Committee by Orvis Schmidt, director of Foreign Funds Control for the Treasury Department. In 1944 the Swedish Patent Office granted 10,000 patents, the largest number in any one year in its history. Over 60 percent were on behalf of German interests. In the first half of 1945, the Swedish Patent Office was again snowed under. About 80 percent of the patents granted were to Germans. The Federal Economic Administration, now liquidated, in its final report revealed the following facts. In 1944, Germans from neutral countries met in Alsace to plan the movement of German assets abroad. As the net closed around Germany, an official of an international relief organization used his pouch to transfer moveable assets from Turkey to Switzerland. Twice a month, in 1944, a high German official flew to Stockholm to sell diamonds, stolen from the Dutch, on the Swedish black market.

The FEA says that the Allied Control Council has a legal basis in international law for acquisition of these assets since it is the successor of authority in the German State. It further says that the job is neces-

sary because German plans for a third world war are known. No wonder they liquidated the FEA in such a hurry. Can you smell the next world war cooking?

Russia

During the war years, 10 blast furnaces, 32 open hearth furnaces, 16 electric steel furnaces, 14 ferro-alloy furnaces, 21 rolling mills and tube mills, and 13 coking batteries went into operation in the Soviet East. From 1940 to 1943, the output of coal in the Urals doubled. Its power resources, too, almost doubled during the war. Some stations increased their capacity five times and more. The Urals machine-building industry increased several hundred percent during the war. It also set up its own machine tool industry.'

The use of electric power in Soviet industry is over 9 times greater than in 1913. In 1945 rural electrification made great progress. About 600 hydroelectric plants and over 800 steam power plants were put into service in 1945. The program for 1946 envisages 1600 hydro plants and 1000 steam plants. Most of the hydro-plants were small units set up on small rivers and lakes, and designed for local use. It is estimated that small rivers in Russia have a potential capacity of 6,000,000 kilowatts.

In 1928 there were only 1,600 collective farms. Today there are 217,000. Before collectivization began there were 25,000,000 small peasant-holdings and the country was unable to supply its own needs for grain and other produce.

'Science has been of primary importance in the development of the national economy.' In February 1931, at the first Conference of Industrial Workers, Stalin put forward the slogan, "*Technology in a period of reconstruction decides everything.*" (italics ours)

In the Question Box

By Speakers Division 8741-1

1. How many people are Technocrats?
2. If Technocracy is adopted, just how will those who centrally administer the Technate be chosen?
3. Why shouldn't Technocracy's benefits be extended to the whole world? C.G.B.

These three questions are often asked of Technocracy speakers. Let's take them in rotation. First, as to the number of members. The reason Technocracy doesn't stress its numerical strength is because that attitude is Price System bandwagon psychology. A great many people think that if enough other people are swallowing a certain line of guff, there must be something in it. Americans are great multipliers. They love to add a little bit to a story before they pass it on. They are also great joiners. Almost any ideology that promises enough can find an army of followers.

The political and social history of U.S. is replete with world-saving movements that waxed prosperously for a brief day, and then waned into oblivion. Where are the more than 600 pseudo-Technocracy organizations that arose in the early 1930's? They sprang from the financial brains of racketeering promoters to exploit the nation-wide and world-wide social impact caused by the real Technocracy. They have gone the way of all other four-flushing movements in our national history, leaving behind them, by their lying misrepresentation, an epitaph that spells out only a bad legacy to handicap the real thing.

There was only one Technocracy then, there's only one now and there'll only be one in the future. Technocracy refuses to clown to satisfy the milliard-headed army of moronic joiners and followers. It refuses to cater to Price System psychology or employ Price System methods. Among these are a long list of names of illustrious jackasses on your letterheads, testimonials from great and near-great stuffed shirts, and an imposing roll of memberships. All these signify only zero, multiplied over and over.

The point is NOT HOW MANY are the Technocrats but HOW CORRECT are they? If you are the only one who is correct and everybody else is wrong, you are a majority of one. Men do not make events. Events make men. Nations and cultures do not make events. Events make nations and cultures. Physical events are precipitating North America into a major social crisis from which it will either go backward into a modernized version of medieval Authoritarianism or go forward to a higher form of civilization.

Our job is to find enough alert, intelligent citizens, and educate them about the physical trends so they can direct our beloved land into a higher culture. It won't take so many. There is a pool of Americans who have not been too badly contaminated by the Price System. Let's find them. By this time you will have guessed that this writer either doesn't know how many Technocrats there are, or he doesn't want to tell. Both guesses are correct. If he knew, he wouldn't tell, for the above reasons and many

more. The fact is, however, that he doesn't know. He'll go you even one better. He doesn't give a hoot in hell how many there are. It's the idea that counts.

Your second question is answered in the *Technocracy Study Course Book*. Study Lesson 21 carefully, especially page 229, and you will know as much as this writer does. If you do not have the book, a copy may be obtained at nominal cost from your nearest Technocracy Section.

Your third question takes us into the international field. Before we can summon the gall to offer Technocracy to the whole world, it might be a better idea to install it in North America and get it operating here. Then we would be in a position to make a definite contribution to world improvement. At present we're not. To this writer's knowledge, no official statement has ever been issued by Technocracy that it intended to isolate North America from the world.

The reasons why Technocracy puts the accent on North America are that this Continent is our home, and also because Technocracy's analysis and synthesis was made on the basis of physical conditions here. However, the trend of world events affects North America and is constantly taken into account by Technocracy. What more can any one ask? One thing is sure. Technocracy is not in favor of the rest of the world first and America last. Technocrats are not agents of any foreign power. They are North Americans, first, last and straight down the middle. If we *really* want to help the whole world, the best way to do it is to clean out our own Augean stable first. Don't you agree?

Can I, with only a little time, a little education, and little energy become a Technocrat?

M. A. C.

The answer is most decidedly yes. If you are a responsible citizen from any walk of life or economic level and desire to advance the program of Technocracy, you are eligible. Regarding your three self-proclaimed limitations, let's examine them, one by one. First you say you have only a little time. The point we wish to bring out is that no one has any more time than you. Arnold Bennett put it this way:

You wake up in the morning and Lo! your purse is magically filled with twenty-four hours of the manufactured tissue of the universe of your life . . . No one receives either more or less than you receive. Waste your infinitely precious commodity as much as you will, and the supply will never be withheld from you. Moreover, you cannot draw on the future. Impossible to get into debt!! You can only waste the passing moment. You cannot waste tomorrow, it is kept for you.

Try keeping a budget of your time for a week. Draw a simple chart, divided into quarter hour periods to cover twenty-four hours and seven days. Carry it around with you and every hour or so mark down in the correct time space what you were doing. At the end of the week, total the various items, such as time spent in working, eating, sleeping, necessary domestic duties, movies, etc., etc. You will be amazed at the low load factor on your time devoted to socially useful items. We're not trying to preach at you. After all, you know, time can be measured.

As a second limitation, you say you have only 'a little education.' What a fortunate man you are. Price System education is mostly mis-education. Except in the technical and

scientific fields, nine-tenths of what the Price System teaches us as culture is a fraud. There is a vast difference between intelligence and education. A person can be educated till it runs out of his ears, and still be very stupid. A great many are. On the other hand, a person can be ignorant and at the same time be very intelligent. It is no crime to be ignorant. But it is a crime to be stupid, a crime of the Price System.

Any alert, intelligent citizen can understand and help to promulgate Technocracy's analysis and synthesis. You don't have to be an engineer or a scientist. With all due respect to the functional competence of these gentlemen, most of them are socially stupid. There are too many miseducated smart fools, who know all the wrong answers to social problems. That group is the *real* common herd. It is a privilege not to belong to it. Fortunately, the process of intellectual corruption is not yet universal and complete. There is a pool of citizens in all walks of life with innate intelligence. We suspect you belong to it.

Your last objection about too little energy need not deter you. What is too little energy? Superman would say that anyone who couldn't jump over the Empire State Building had too little energy. By his standards, he'd be correct. By ours, he is a freak. Leaving out sickness and senility, every adult human body generates, on the average, about the same amount of energy. There isn't a great deal of difference. There is, however, a tre-

mendous difference in how various people apply their energy.

The point of all this is that we're not trying to reform you from a static state of social incompetence into a dynamic condition of social functionality. If you want to be dynamic and functional, nobody can stop you, not even yourself. You will yield up every Price System value for the privilege. If you don't want to be, all the moralizing this side of hell can't stir you into it. It's entirely up to you.

In case you had not thought about it, there is something to get excited about in this problem. It's America herself. Have you seen her? It's a great land., the fairest on this whole earth. From the tropical seas to the Arctic Ocean, she has been endowed, by the slow process of physical evolution, with every material thing necessary to sustain a high civilization. It's your land, as well as our land. What do you think the Technocrats are working for? Glory? No! It's for America.

There's precious little glory in bucking the vast ocean of Price System Philistinism. There's no reward waiting for the Technocrats for social functionality. There's no pay; no honor; no recognition. But, there is a tremendous satisfaction in playing the role of founding pioneer to a higher form of civilization. Make no mistake, that is what is occurring before your very eyes. Yes, you can be a part of this great drama. Why not? It's lots of fun. Investigate Technocracy!

The House That 'Jack' Built

More than 16 percent of all city housing in the U.S. is without running water. About 33 percent has inadequate inside lighting. About 50 percent has inadequate daylight or ventilation. About

66 percent has dangerous or inadequate heating and no inside private toilet. More than 66 percent has no private bath.—From a National Housing Agency Statement (as quoted in the *Chicago Sun*, December 23, 1945.)

Modern Design

A war-developed, pocket-size recording set may soon become part of the newspaper reporter's standard equipment. This device, due for an early test by the *Milwaukee Journal*, may be entirely concealed, except for a small microphone. It records all sounds within several yards on a magnetized, stainless steel wire, which may be played back any number of times, apparently lasts indefinitely. *Forbes*, August 1, 1945.

Small gauges made of synthetic sapphire outlast steel gauges 300 to 1. That's the claim put forth for these small tools which cost only four to six times as much as their steel or tungsten carbide counterparts. Now being tested in a number of Chicago factories, the sapphire tools are the product of one of the country's biggest watch makers.—*Wall Street Journal*, August 2, 1945.

25,000,000 PAPER BAGS A DAY

In one day 25,000,000 paper bags are produced at the world's largest kraft paper mill and bag factory at Savannah, Ga. It takes thirty-two freight cars to ship them away, says The Associated Press. (*New York Times*, January 20, 1946.)

'Industrial engineers today tailor-make new factories to meet the special needs of the individual client. The manufacturer's production process and layout is studied, then the building is designed to fit that layout. Many manufacturers are hiring engineering firms to streamline their warehousing and distributing systems. One manufacturer asked an engineering firm to design a warehouse layout capable of receiving goods in carload lots with facilities for storage and distribution in less than car lots, with the operation to be taken care of by one man.' (*Wall Street Journal*, September 18, 1945.)

If we wish to make a new world we have the material ready. The first one was made out of chaos.—Robert Quillan.

Some Technocracy Section addresses in Great Lakes area

- 8040- 2—Box 356, Ambridge, Pa.
- 8040- 3—340 Brighton Ave., Rochester, Pa.
- 8041- 1—1613 East 51st St., Ashtabula, Ohio.
- 8141- 3—39 E. Market St., Akron, O.
- 8141- 4—2237 Front St., Cuyahoga Falls, Ohio.
- 8141- 7—P. O. Box 270, Barberton, O.
- 8141-14—P. O. Box 553, Kent, Ohio.
- 8141-15—10537 St. Claire Ave., Cleveland 8, Ohio.
- 8240- 1—207 N. Washington St., Gallion, Ohio.
- R. D. 8242—c/o Arthur C. Clayton, Marine City, R. 1, Mich.
- R. D. 8242—c/o John Reynolds, St. Clair, R. No. 2, Mich.
- 8341- 1—1430 Adams St., Toledo 2, Ohio.
- 8342- 1—9108 Woodward Ave., Detroit 2, Mich.
- 8342- 2—55 Niagara, Pontiac, Mich.
- 8343- 1—6717 N. Sangamon St., Flint 5, Mich.
- 8439- 1—P. O. Box 81, Station A, Dayton, Ohio.
- 8741- 1—3178 N. Clark St., Chicago 14, Ill.
- 8743- 1—2204 W. Vliet St., Milwaukee 5, Wis.
- 8844- 1—620 S. Broadway, Green Bay, Wis.
- 8844- 2—1011 W. College Ave., Appleton, Wis.
- 8844- 3—135 Van St., Neenah, Wis.
- 9038- 1—4518 Delmar Blvd., St. Louis, Mo.
- R. D. 9041—2428 13th Ave., Rock Island, Ill.
- R. D. 9140—18 N. 5th St., Keokuk, Iowa.
- 9344- 1—30 N. 10th St., Minneapolis 3, Minn.
- R. D. 9344—527 Wabasha St., St. Paul 2, Minn.
- 9439- 1—817 Walnut St., Kansas City, Mo.
- 9648- 1—P.O. Box 178, Warren, Minn.
- R. D. 9737—4442 Bayley, Wichita 9, Kan.

TECHNOCRACY

NORTH AMERICA'S ONLY SOCIAL DYNAMIC

WHAT?

★ Technocracy is the only North American social movement with a North American program which has become widespread on this continent. It has no affiliation with any other organization, group or association either in North America or elsewhere.

★ The basic unit of Technocracy is the chartered Section consisting of a minimum of 25 members and running up to several hundred.

★ It is not a commercial organization or a political party; it has no financial subsidy or endowment and has no debts. Technocracy is supported entirely by the dues and donations of its own members. The widespread membership activities of Technocracy are performed voluntarily; no royalties, commissions or bonuses are paid, and only a small full-time staff receives subsistence allowances. The annual dues are \$6.00 which are paid by the member to his local Section.

★ Members wear the chromium and vermillion insignia of Technocracy—the Monad, an ancient generic symbol signifying balance.

WHERE?

★ There are units and members of Technocracy in almost every State in the U. S. and in all Provinces in Canada, and in addition there are members in Alaska, Hawaii, Panama, Puerto Rico and in numerous other places with the Armed Forces.

★ Members of Technocracy are glad to travel many miles to discuss Technocracy's Victory Program with any interested people and Continental Headquarters will be pleased to inform anyone of the location of the nearest Technocracy unit.

WHEN?

★ Technocracy originated in the winter of 1918-1919 when Howard Scott formed a group of scientists, engineers and economists that became known in 1920 as the Technical Alliance—a research organization. In 1933 it was incorporated under the laws of the State of New York as a non-profit, non-political, non-sectarian membership organization. In 1934, Howard Scott, Director-in-Chief, made his first Continental lecture tour which laid the foundations of the present nation-wide membership organization. Since 1934 Technocracy has grown steadily without any spectacular spurts, revivals, collapses or re-births. This is in spite of the fact that the press has generally 'held the lid' on Technocracy, until early in 1942 when it made the tremendous 'discovery' that Technocracy had been reborn suddenly full-fledged with all its members, headquarters, etc., in full swing!

WHO?

★ Technocracy was built in North America by North Americans. It is composed of North American citizens of all walks of life, Technocracy's membership is a composite of all the occupations, economic levels, races and religions which make up this continent. Membership is open only to North American citizens. Aliens, Asiatics and politicians are not eligible. (By politicians is meant those holding elective political office or active office in any political party.)

★ Doctor, lawyer, storekeeper, farmer, mechanic, teacher, preacher or housewife—as long as you are a patriotic North American—you are welcome in Technocracy.

**Great Lakes Technocrat,
843 Belmont Avenue,
Chicago 14, Illinois**

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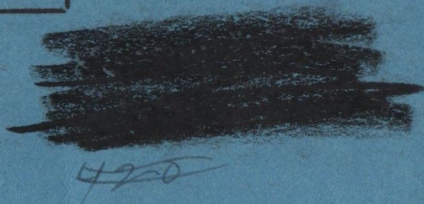
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'I Shot an Arrow Into the Air'

Dear Anne Laurie:

I received the bundle of magazines and pamphlets, 'Fable of the Oracle' and sub-blanks. Thank you again and again; it was the best Christmas present I got; I must read them myself before passing them on.

Your letter also received and explanation of why we were outlawed. I feel a deep sense of shame for my Government when I peruse the subject matter in our magazines.

Enclosing some replies I get; mostly I don't get replies, and sometimes very nasty ones. But I was contacted this way myself, and can't even recall the name of the Technocrat who wrote to me.

My work cannot be evaluated exactly, but some may go to Technocratic meetings because of my letters; a kindlier feeling may be engendered here and there. For my part it is no exaggeration to say my study of Technocracy has been the greatest thing that has ever happened to me. I wear my button with pride. If sometimes the magnitude of the work we engage in overwhelms me I take heart at the knowledge that in other places Technocrats are working hourly in this feverish race against time.

One of the walls of my small sitting room is used for a 'display' of charts, and those wonderful photographs of machinery. You may be sure the photo of Howard Scott in one of the magazines you sent occupies an honored place.

I will not expect a reply to this letter. I know you are as busy as I.

And whatever befalls, we have the wonderful satisfaction of saying together:

'We have done what we can.'

Salutel

**Mrs. Alice Butala
Divide, Sask.
Canada**